

ARCHITECTURAL RECORD

9 September 1958

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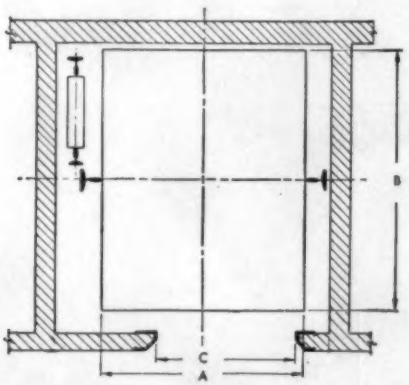
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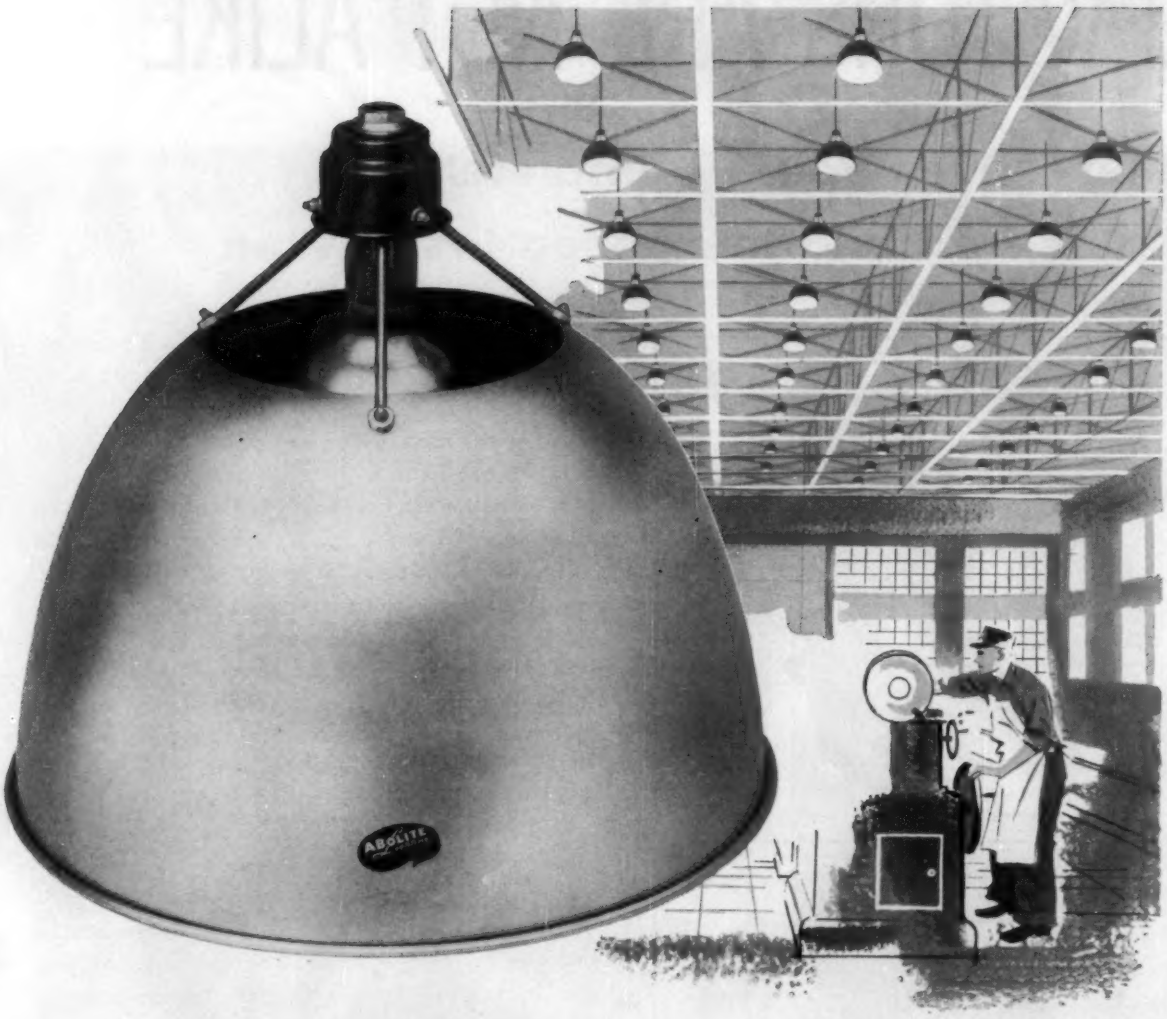


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Advanced Structure for Flexibility in the Texas Instruments Building. O'Neil Ford and Richard Colley, Architects. N. Bleecker Green photo

ARCHITECTURAL RECORD
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Vol. 124 No. 3

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ARCHITECTURAL RECORD
(combined with
AMERICAN ARCHITECT and
ARCHITECTURE)
is published monthly,
except May 1958
when semi-monthly,
by F. W. Dodge Corporation,
10 Ferry Street,
Concord, New Hampshire.
Editorial and executive offices:
119 West 40th Street,
New York 18, New York.
Western editorial office,
2877 Shasta Road,
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Members of Audit Bureau of Circulations and Associated Business Publications. ARCHITECTURAL RECORD is indexed in Art Index, Industrial Arts Index and Engineering Index.

Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Subscription prices: Published monthly except May 1958 when semimonthly. U. S., U. S. Possessions and Canada: $5.50 per year; other Western Hemisphere countries, Spain, to those who by title are architects and engineers, $9.00 per year. Single copy price except Mid-May 1958 issue $2.00; Mid-May 1958 issue $2.95. Beyond Western Hemisphere, excluding Spain, to those who by title are architects and engineers, $9.00 per year for 12 monthly issues not including Mid-May 1958 issue. Subscriptions from all other outside U. S., U. S. Possessions and Canada for 12 monthly issues, not including Mid-May issue, $24.00 per year. Change of address: subscribers are requested to furnish both the old and new address, sending if possible stencil impression from magazine wrapper, and to include city delivery zone number, where such is used, for the new address. Allow four weeks for change.

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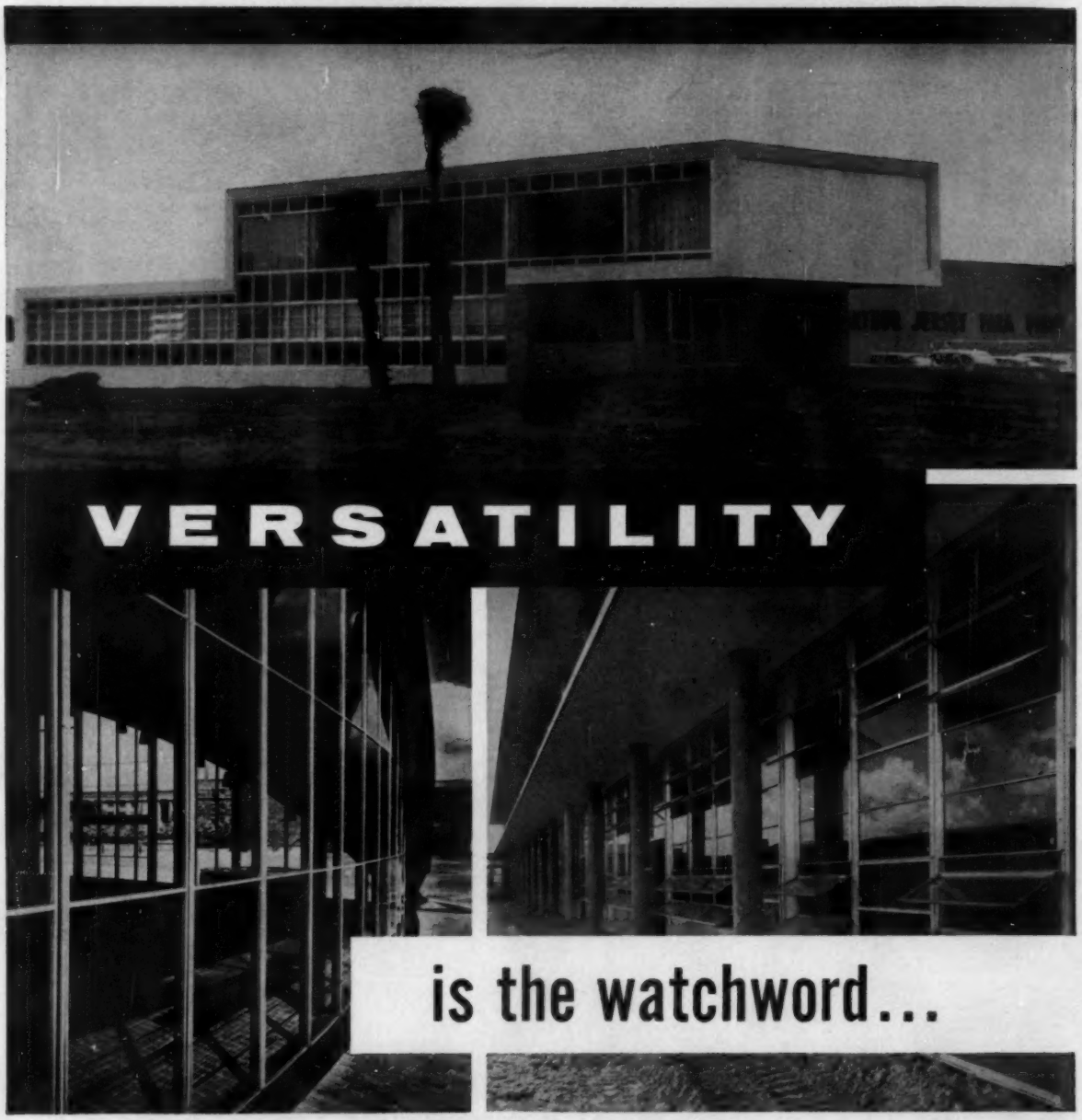
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Brussels vs. Philadelphia 1976

One of this summer's visitors to the Brussels World's Fair was the young architect who is chairman of the committee charged with planning a 1976 Philadelphia World's Fair to celebrate the Bicentennial of the signing of the Declaration of Independence. Jack Thalheimer, 28, of his father's firm of Thalheimer and Weitz, hopes life can be made easier for the visitor to Philadelphia 1976. "What the Brussels Fair lacks," he says, "is coordination. The over-all design of a big fair should make it easy for a visitor to see the most important features in a minimum of time. In Brussels, even if you just want to see the high spots, it takes more time than the average visitor can afford to spend. People are interested in different things. But no matter what may be your interest, you have to see everything in order to see anything in Brussels." A workable overall design, Mr. Thalheimer believes, might incorporate "sampler exhibits that would give each nation a chance to play up the achievements of which it is most proud. These could be housed in an introductory enclosure leading back to a large exhibition building" for more detailed display. As to theme, Mr. Thalheimer would have Philadelphia focus on the arts, and with no backward looks: "no farther back," he says, "than a year or two before the Fair." (He liked the much-controverted U. S. exhibit at Brussels of artists under 45.) The Bicentennial Committee was formed in January of this year by the Philadelphia Junior Chamber of Commerce after Mayor Richardson Dilworth had asked the Chamber to assume "prime and continuing responsibility for the formulation of a planning framework for a Bicentennial Celebration in Philadelphia."

A Senator Speaks Up for Beauty

"There is a question of deep concern to me," Senator Margaret Chase Smith of Maine said in a Senate address this summer. "Is Washington to be the spacious, beautiful Capital of our Nation, or a commercial city? If the former, there must be an awakened attitude on the part of Congress and the various government agencies on the esthetic angle of the city's growth. . . . In all the intricate problems which beset the Capital, each with its ramifications, of operations involving many departments or agencies, conflicts arise, largely because there are too many planning agencies, each going its own direction, with no real coordination. The results are frequently stopgap measures arrived at by default, which, if continued, will irreparably damage the beauty of our Capital. Against the force of the unstemmed tide of progress, piece-meal measures are no substitute for settling the basic issues of transit, parking and traffic, zoning, land acquisition and so forth. We must have the will to get down to earth and settle these problems. . . . Progress and preservation, functionalism and beauty, are not incompatible. To oppose a bridge at the foot of the Mall is not to be unrealistic about traffic problems. Traffic and the beauty of the nation's memorials are each a part of our present day civilization, and they can co-exist if the traffic commissioners, engineers, planners are all determined to find the right solution. And if Washington is to remain the splendid Capital of a great nation, funds must be appropriated for this purpose as recommended by its agencies. From the long-range point of view, no nation can exist simply by building bigger and bigger government. It cannot afford to lose sight of its esthetic and spiritual life, or graciousness, good will and vision. Every great civilization of the past is known to us and measured by its art forms. A nation without regard for its art forms is on the way to decline, and certainly we are not ready for that."

The Form of the Metropolis

A problem newly important to architects newly conscious of responsibilities beyond the single building their typical single commission may encompass was discussed in a recent speech before the Philadelphia Housing Association's monthly "Forum on Neighborhoods, Old and New," by Hans Blumenfeld of the Metropolitan Toronto Planning Board. "The Metropolis as we know it today is a new phenomenon," said Mr. Blumenfeld. "We may still talk of the big city and of suburbs, but these words have lost their original meaning. We are dealing with different parts of a single new unit, an entirely new form of human settlement, which is neither city nor country, and which, for lack of a better term, we may call a Metropolitan Area, or Metropolis for short. . . . The Metropolis is our fate. The question is not *if* we want it to be, but *how* we want it to be. . . . Cities are perceived in two ways: from the outside as a silhouette, and from the inside as a sequence of spaces of streets and squares. A metropolitan area is so extensive that it can rarely be seen as a whole from the outside; and it is far too vast to be perceived as a sequence of streets and squares. It can only be dealt with as an urban landscape, with the silhouette of the built-up sections surrounding the open park or water areas. The center stands out strongly in American cities by the silhouette of its skyscrapers, but the balance of the area tends to be formless. It can be organized, socially as well as formally, only around subsidiary community centers. In the planned suburb of Vällingby near Stockholm, apartment towers surround the community center, in which public and shopping facilities are grouped next to the suburban railroad station. . . . A second approach is relation to a "leitmotif" which unifies the entire area. In Greater Philadelphia the relation to the two rivers might be developed into such a leitmotif. We have a few —far too few—examples of neighborhoods which have a tangible form with which their residents can identify themselves. To find a form for the entire Metropolis which its citizens could perceive as a thing of pride and joy remains a task for the future."

Space Age Note

The American Society of Mechanical Engineers and the American Rocket Society have announced that their future national meetings will be held independently of each other. Primary reason, according to the announcement, is the expanding size of the technical sessions and hotel space limitations. Second reason: "increasingly independent status of the field of rocketry and the concurrent growth of A.R.S. from a small group to one of substantial stature in the technical field."

A Record Special Report

WHENCE ARCHITECTS AND WHITHER ARCHITECTURE?

An Affectionately Critical Essay by One of the Participants on the Third Annual A.I.A.-A.C.S.A. Seminar on the Teaching of Architecture

By Albert Bush-Brown

Those who in an arch or sneering moment think of Skidmore, Owings & Merrill as "The Three Blind Mies" will surely be caught short by the leadership displayed by a principal designer in that firm, Walter Netsch, whose quiet, almost buried, remark embraced the theme of the whole Nantucket conference: The aim of architectural education, he said, is to nurture intuitive judgment, sharpen visual perception and to encourage a will to understand and improve the society in which we live—through architecture.

His words were needed by the group of 36 at the third annual seminar on "The Teaching of Architecture." This valuable conference followed one held at Cambridge in 1956 under the direction of M.I.T.'s Anderson and Harvard's Bogner, and a second held at Aspen in 1957, in direct fulfillment of Recommendation 17 in *The Architect at Mid-Century*, the A.I.A. survey published in 1950. Beautifully organized by a committee of educators, notably Herbert Beckwith of M.I.T. and Harold Bush-Brown, chairman-emeritus at Georgia Tech, the third seminar drew teachers and prospective teachers from 18 states, Hawaii and Canada. Panels of distinguished teachers and architects contributed their services, while the Graham Foundation in Chicago, the American Institute of Architects and several architects generously donated money for scholarships and expenses. The seminars are co-sponsored by the A.I.A. and the Association of Collegiate Schools of Architecture.

There were formal speeches and informal ones, followed by discussions in small groups, whose ideas were later summarized by participants, often brilliantly, as by Minnesota's Fred Koeper, who made everyone wish he had been in on the original discussion, even those who had been. There were lively sideshows too, notably the A.I.A.'s Eric Pawley, whose evening lecture, "Architecture and the Neglected Senses," was a Dadaist show, comically replete with rich slides, studious graphs, relief cartoons and scented aerosol bombs.

Farewell to Reform?

What Gropius and other revolutionaries once represented as a liberal social program for a modern architecture was openly disavowed time and time again. Even Stubbins and de Mars, whose Yuba City and Chandler so fully express the social aims of the thirties, now seemed to be members of a non-angry generation. They were not sanguine about education or architecture, neither were they out to foment a revolution. All agreed: We have a modern architecture; now it must evolve to meet demands for beautiful, emotional environment.

That curious split from social and educational reform was apparent on the opening day when a challenge offered by A.C.S.A. President Pickens found no takers. Mr. Pickens fanned an old flame with his reminder that there are serious difficulties in the way of teaching a practical subject in an academic environment; but nobody had an alternative, and the discussion left lingering the age-old doubt that artists might not survive four or five years in school.

Some latterday allegiance to the Romantic picture of an architect as a social reformer and coordinator of betterment forces did appear momentarily. A sweeping view of the social issues affecting architecture was taken by Stubbins, who keynoted a series of major changes: the dominance of Federal government, highly mechanized production, mobile clients, group insurance, organized labor, depletion of natural resources, solar and atomic energy, quick communication and transportation. To meet demands from these, Stubbins wanted to educate intelligent and adventuresome clients and create strong professionals, not only architects, but mechanical and structural engineers as well who would, he thought, graciously enjoy the accolade "architect", but remain subservient to the form-maker artist and coordinator.

But few seemed to expect architects to grip social issues. It seemed particularly and perversely old-fashioned to think of the architect as a sociologist, imposing his way of life on clients, rather than making his building become a portrait of them, as Walter Kilham put it. Social liberalism seemed tired, even boring, and it was apparent that some were disillusioned. "So many of the things I worked for in the thirties," de Mars admitted candidly, "have now come to pass, and they worry me."

It sometimes seemed as though the disillusioned reformer was out to recapture the heyday of Harrie T. Lindeberg and Frank Forster, in an architecture of play, of luxury, even of whimsy, with an illogical, carnival spirit. A delight in phantasy, in the accidental, even in the *homely* and incidental was applauded by Grady Clay, and it all reminded some of the coziness championed by the *Architectural Review*.

Charles Moore put Princeton into the fight. She has no intention of training social reformers, exclaimed Moore, but architects of fine environment; hence Princeton's trips to Yucatan, her interest in Sicily—a unique, visual and humanist education, which he hoped no other school would imitate.

Perhaps Yamasaki struck the sensible note about social issues. "You solve them," he said, "but you don't go looking for them."

Are We Artists Perhaps?

Yamasaki's note played all through the conference, and it reached its highest pitch when he received applause on the theme: the social responsibility of the architect is to bring beauty to life.

A fuller theoretical treatment of the theme came from Vi Hudnut, whose speech on design and the teaching of design analyzed the anticipation and aptitude for order as the oldest and most persistent of desires: whether the reasoned order of the plan, the visual order of spaces and masses rhythmically disposed, or the expressive order that is ideal, poetic and charged with drama. It may be difficult to find one's way in the St. Louis Airport, he reminded us, but the billowing air makes the journey wonderful.

Unfortunately there was little detailed discussion of how to achieve unity of form. But transitions, whether in programmatic or monumental buildings, from ground to building, to the sky, at the corners, at voids, particularly entrances, formed the subject of the third lecture in the Philosophy and History session, which ended on the happy thought that there may be some principles of composition after all.

Where Are We?

But that happiness diminished as we recognized the realistic fact that America's face is no tribute to the architectural profession. De Mars looked back on city planning dreams as "rafts awash in a sea of asphalt."

There was a gnawing doubt about progress in education as Cochran recalled the remarks Jim Hunter made last year at Aspen, where he

continued on page 368

Little Drops of Water (Condensation)

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The owners of a path-breaking apartment development had to pay a repair bill of over a MILLION DOLLARS for ripping out condensation-soaked insulation and replacing damaged plaster walls.

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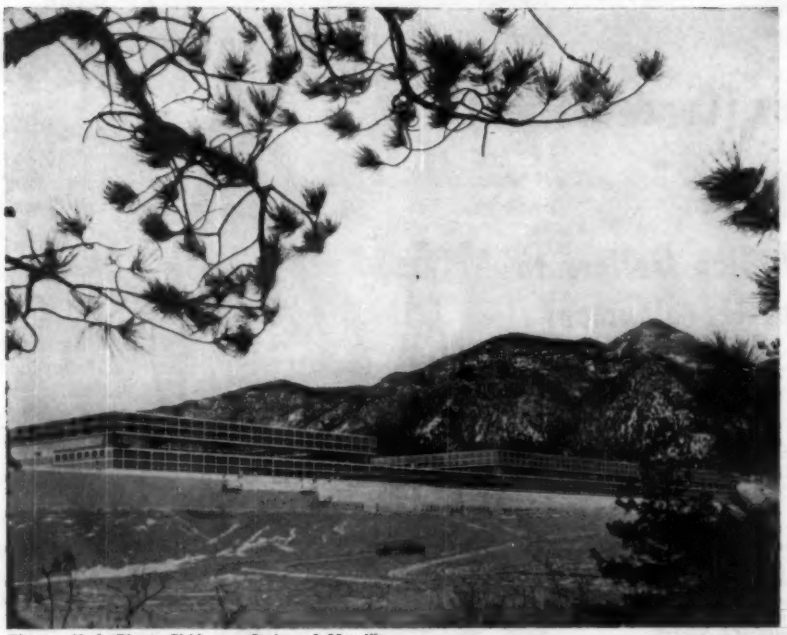
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Buildings in the News

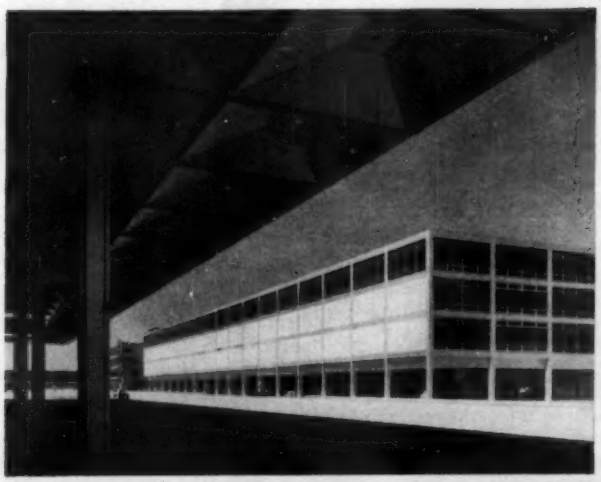


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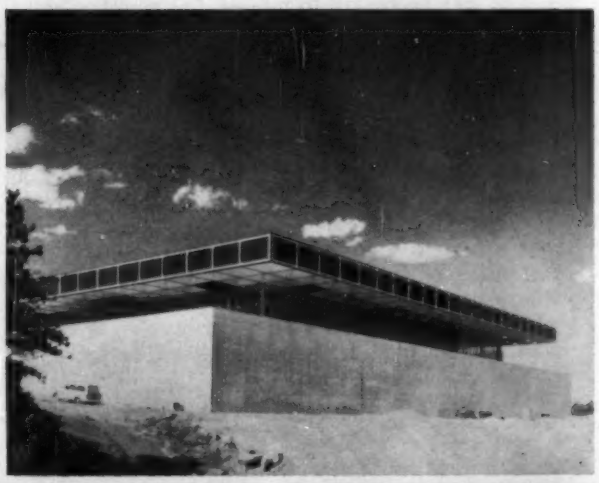
Photos: H. LaPlant: Skidmore, Owings & Merrill

New Buildings Ready at Air Force Academy Site

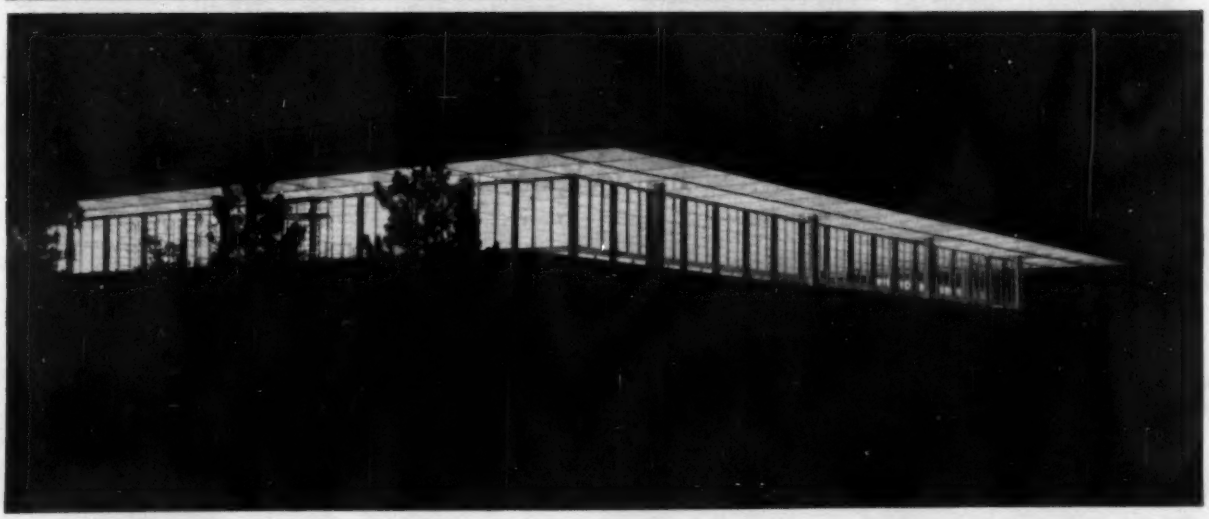
One of the great U. S. architectural monuments of this century, the U. S. Air Force Academy at Colorado Springs, was scheduled for initial occupancy over Labor Day week end. Although it would be next June before the Air Force was prepared to show off the nation's third major service academy at formal dedication ceremonies (coinciding with its first graduation week), some $100 million worth of building—almost 88 per cent of the construction so far authorized by Congress—was to be completed by moving days, August 29-31. Some 67 major building contracts were to be completed by early September—most importantly for the 1145 cadets themselves, the Cadet Quarters, the Academic Building and Library and the Cadet Dining Hall, three of the major buildings of the "Cadet Academic Area" which will be the heart of the Academy and the public image of it. Architects: Skidmore, Owings & Merrill.



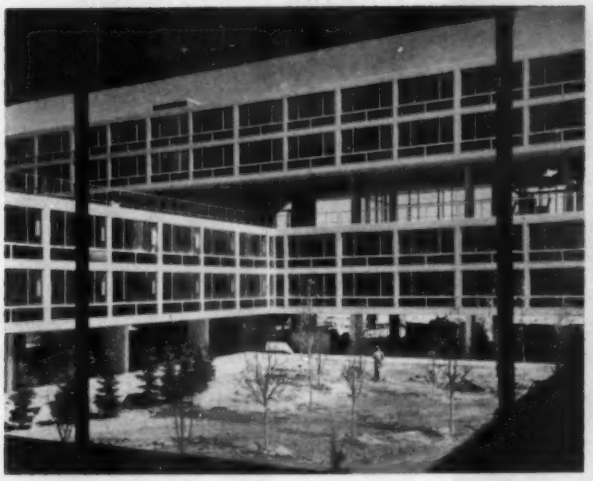
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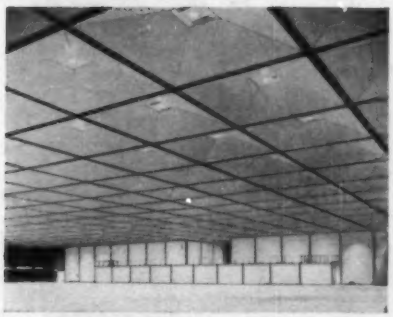


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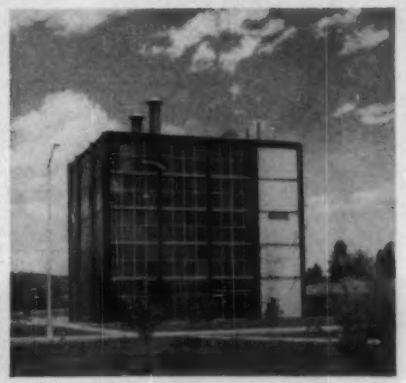






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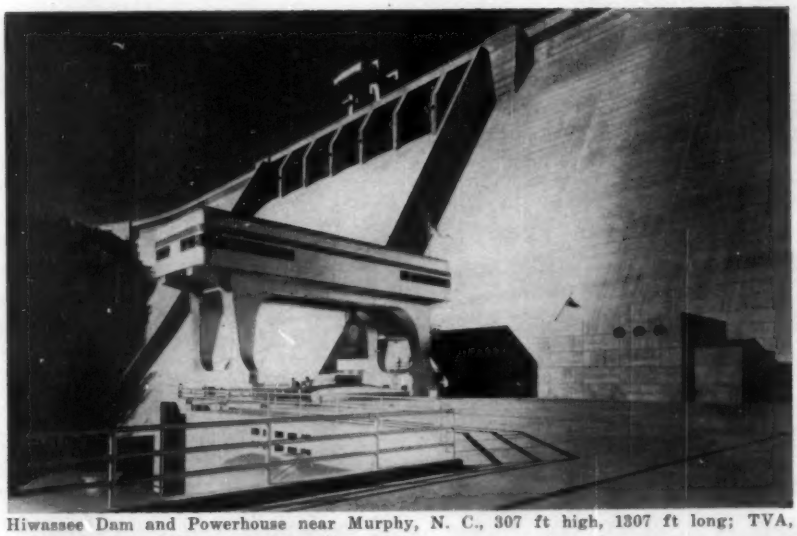


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In the latest photographs available at press time— 1. Cadet Quarters (Robert E. McKee, general contractor), looking up from future playing fields below campus, Rampart Range in background. 2. Academic Building (Farnsworth and Chambers Co., general contractor), from the Cadet Dining Hall. 3. Cadet Dining Hall (Dondlinger and Sons Construction Co. Inc., general contractor) by day and (4) by night. 5. and 6. Cadet Quarters again, from the interior courts which—three stories below campus level—will let the cadets relax away from the public eye. 7. The great interior of the dining hall, looking toward the platform where officers and official guests will sit. 8. Typical two-man cadet room. 9. Typical classroom—windowless, with blackboards on four sides. 10. Administration Building, Service and Supply Area. 11. Heating plant. 12. Quarters, looking past main Administration Building (T.C. Bateson, general contractor).



12



Hiwassee Dam and Powerhouse near Murphy, N. C., 307 ft high, 1307 ft long; TVA, architect and contractor, completed May, 1940



Chemical Engineering Administration Building, Muscle Shoals, Ala.; original design by Fellheimer and Wagner, modifications by TVA, R. A. Wank, head architect.



Watts Bar Steam Plant near Spring City, Tenn.; the design and construction divisions of the Tennessee Valley Authority, completed April, 1945

TVA's First Twenty-Five Years: An Anniversary In The News

The TVA is twenty-five years old this year, and it enters into its second quarter of a century with an impressive list of accomplishments to its credit and its power of creating controversy unimpaired. But, whatever the answer to the questions posed by the creation of such a large and powerful public project, few would argue with the statement that the cause of good architecture owes a great debt to the Tennessee Valley Authority. Aware of the magnitude and permanence of its work, the TVA has never taken its architectural responsibilities lightly. Many a public project has become a monument to the most backward and careless architectural thinking of its day, but the TVA has always been a pioneer of excellence.

From the first, the imagination of architects and public alike was captured by the great dams. They were distinguished for their careful attention to detail, their remarkably appropriate scale, and their elimination of the superfluous. The Norris Dam, the first to be completed, was adjudged one of the most significant structures in the last hundred years of American architecture in a poll taken by the RECORD in 1956.

Less well known, but equally significant, are the designs for the subsidiary aspects of TVA's activity. The workers employed in building the Norris Dam were housed, not in a miscellaneous collection of huts and shantys, but in buildings that eventually became the nucleus of the model town of Norris, Tennessee. The TVA has devoted much effort to the design of housing for workers and permanent employees. A pioneering group of prefabricated houses erected in 1942 for construction workers on the Fontana Dam is shown on the facing page.

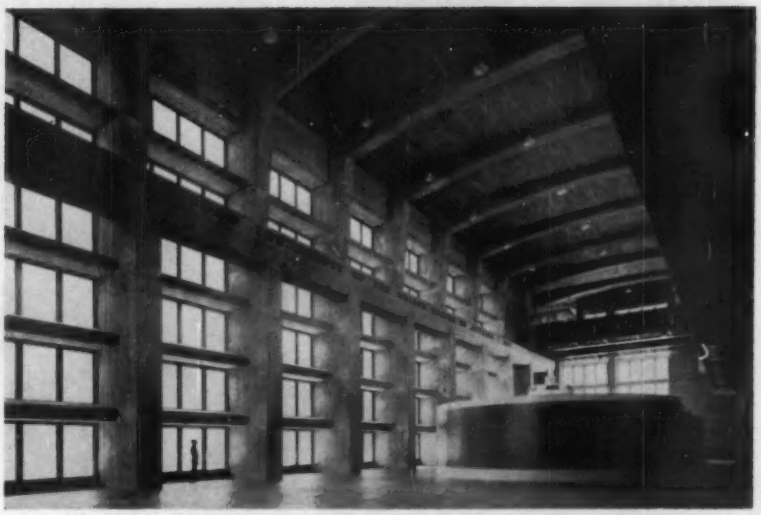
Even such details as the design of new bridges needed for access roads were handled with great care and originality. TVA bridges have won prizes in a number of contests.

The architects of the TVA have also created a group of noteworthy industrial buildings: the powerhouse of the Fontana Dam with its noble use of reinforced concrete, the Watts Bar Steam Plant, and the Chemical Engineering Administration Building at Muscle Shoals, Alabama.

Such recent buildings as the Johnsonville Steam Plant indicate that the TVA may have begun to exchange its youthful exuberance and vitality for the conventionality of an established institution, but the high standards and attention to detail remain.

All photographs TVA

1. Fontana Powerhouse near Robbinsville, N. C.; TVA, architect and contractor, 1945
2. Prefabricated houses for Fontana Dam village, developed and built in 1941-1942 by the Schult Co. of Elkhart, Ind.
3. Two TVA bridges: above, across Buffalo Creek near Norris, Tenn.; below, a footbridge near Murphy, N. C. that received an award from the A.I.S.C. in 1939



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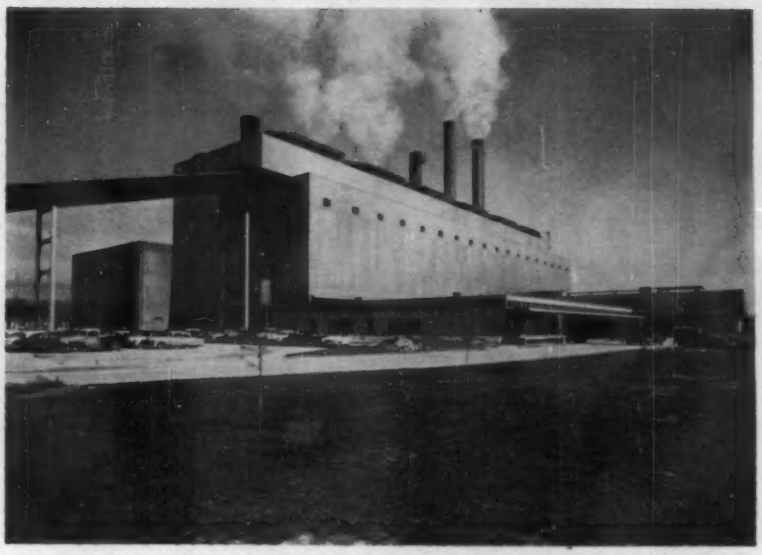
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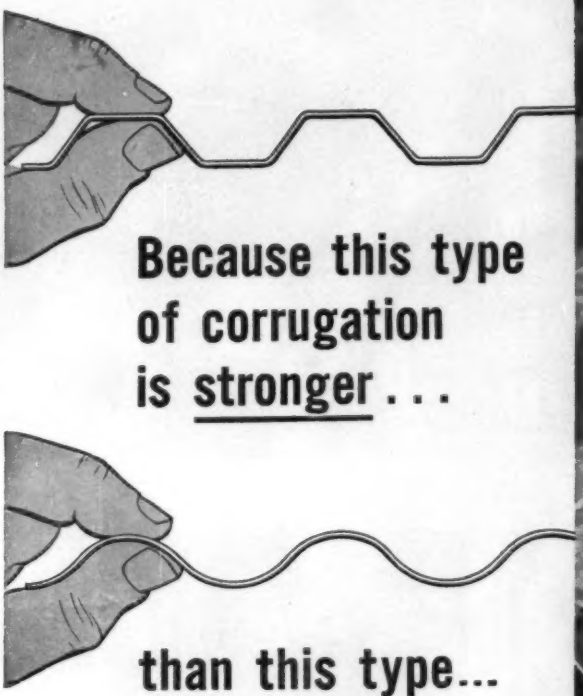
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4. Johnsonville Steam Plant near Waverly, Tenn.; TVA, architect and contractor, completed February, 1953



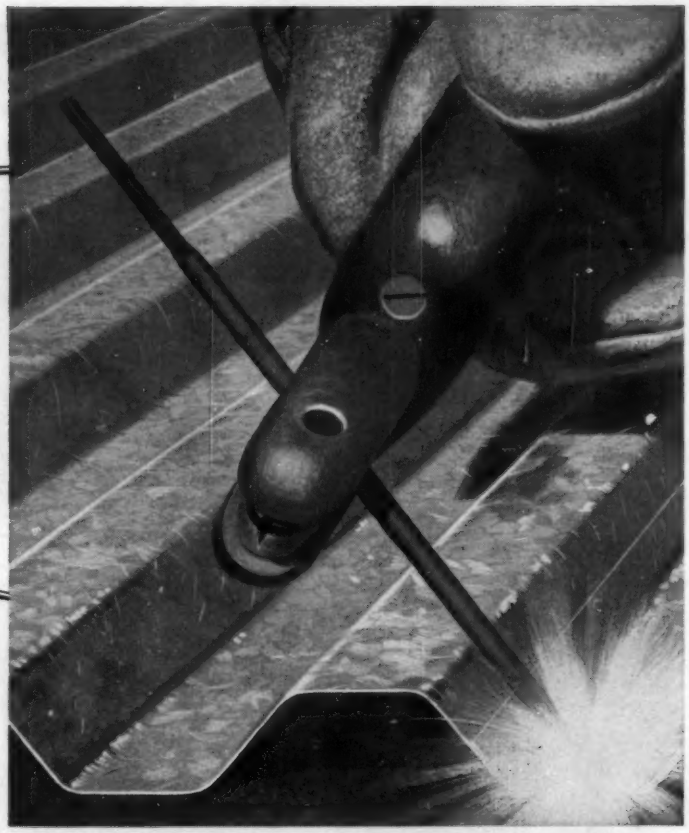
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BOOKS ON TVA—Although the buildings of the TVA have attracted much attention in the architectural press, the first book on the subject will be "The Building of TVA" by John H. Kyle, to be published October 15 by the Louisiana State University Press. The standard work on the TVA itself remains David E. Lilienthal's "TVA: Democracy on the March" as published by Harper and Brothers in 1953. A 42-page "Bibliography of the TVA Program" is available from TVA, Knoxville, Tenn.



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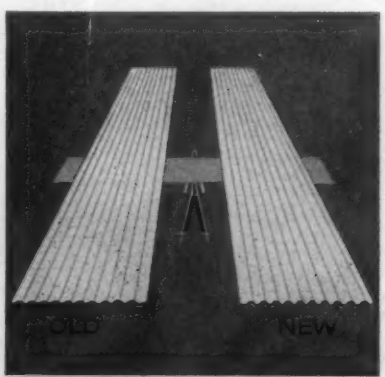
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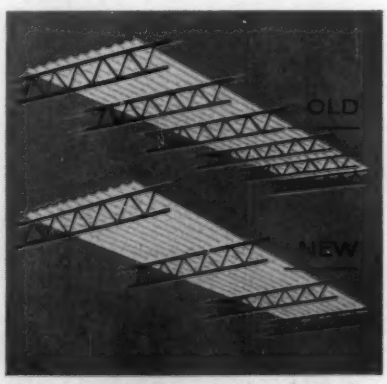
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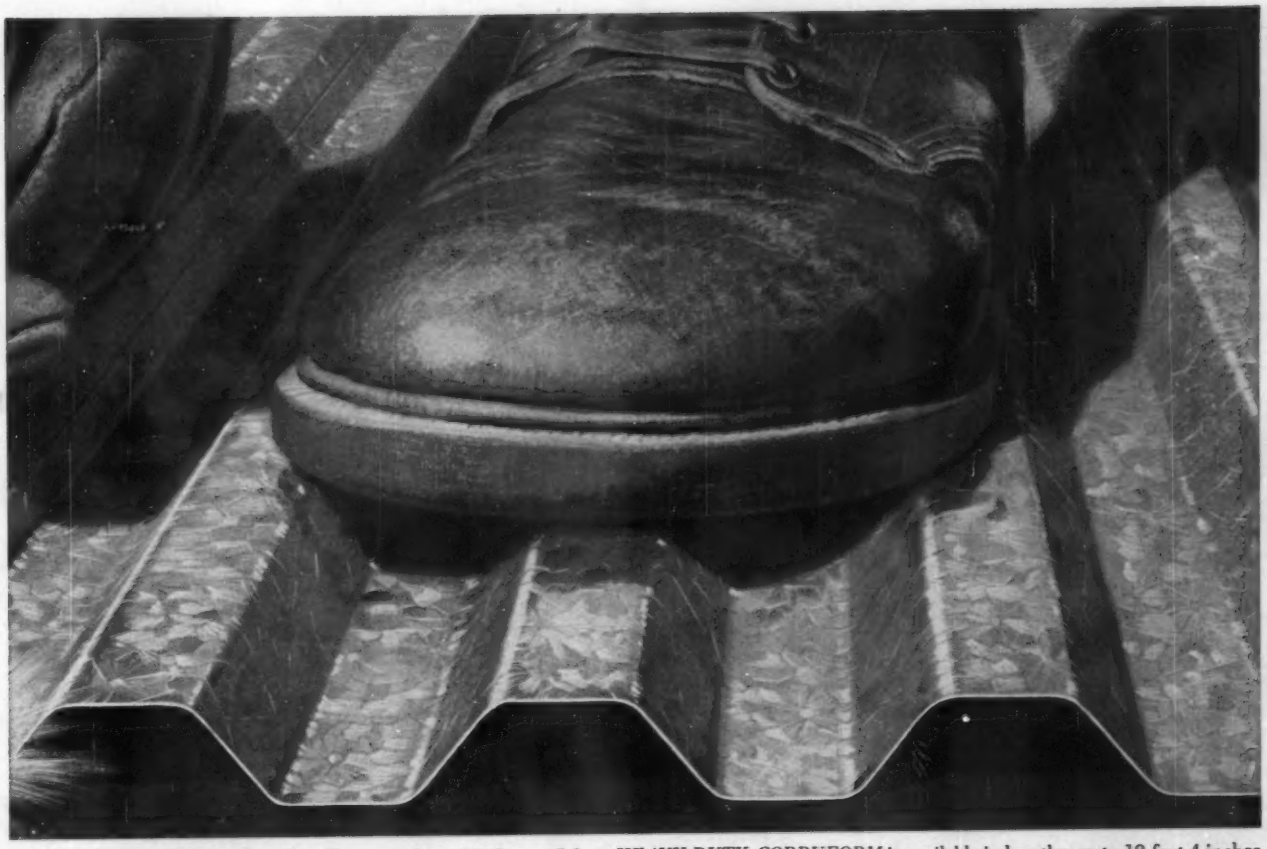
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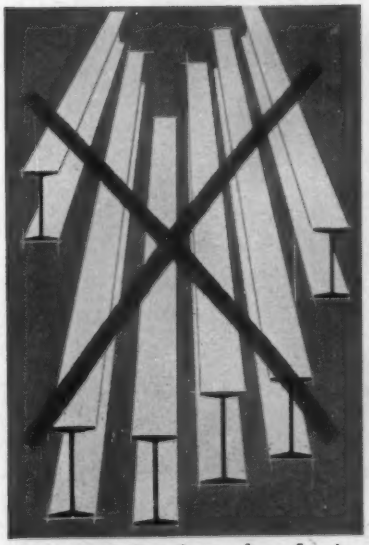
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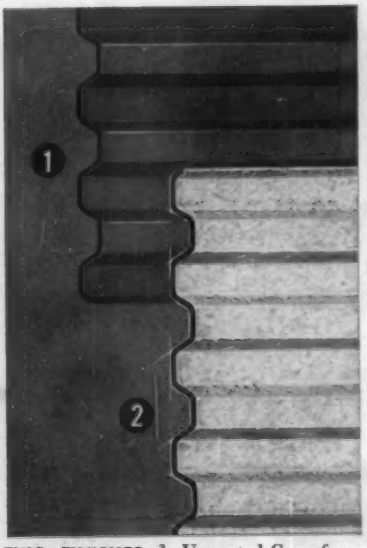
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REFLECTIONS ON C.S.I. CONVENTION: HARD WORK WITH FERVOR ON A HOLIDAY WEEK END

Pick a July 4th week end, with technical meetings all day Saturday following Independence Day, 300 specifications enthusiasts sticking hard by seminars in rooms with fickle air conditioning, and you have some measure of the "religion" imbued in members of the Construction Specifications Institute. Not that C.S.I. wanted to test the faith of its followers at this year's annual meeting, their second, in Cleveland, July 5-7—it just happened this way because of the date for A.I.A's convention. In fact, C.S.I. feels it has grown up sufficiently to hold its next year's meeting in Chicago without relation to A.I.A's affair in New Orleans.

Another indication that C.S.I. is taking on the mantle of a full-fledged, professional organization is their convention decision to hire an executive director, salary at $10,000, office in Washington. (Action on this was a meeting called for Sept. 5-6 to pick the man.)

Newly elected officers are J. Stewart Stein, president, of Chicago; Willard Barrows, vice-president, of New York; Harry Plummer, secretary-treasurer, of Washington, D. C.

Newly named directors are: H. J. T. Martin, Dallas, Texas; H. Griffith Edwards, Atlanta, Ga.; Glen Abplanalp, New York City; Frank Crouch, Detroit, Mich.; Frank Crimp, Boston, Mass.; Rolf Retz, Sacramento, Calif.

Directors on the board yet to serve one more year are as follows: Joseph Accardo, Washington, D. C.; James Bort, Chicago; R. Redmond Coghlan, Jr., Los Angeles, Calif.; Norvel Hill, Cleveland, Ohio; Jack Lewis, Beverly Hills, Calif.; and Lester Burn, past president, Washington, D. C. N. Norman Hunter, the immediate past president, died in Los Angeles last June. In tribute to Hunter, a resolution to establish a posthumous fellowship was introduced by the Southern California Chapter, and unanimously passed.

In addition to hiring a full-time executive director, C.S.I. is taking the following steps to tighten the reins:

(1) An executive committee has been formed consisting of the three top officers (J. Stewart Stein, Willard Barrows and Harry Plummer) and two other members, Norvel Hill of Cleveland and R. Redmond Coghlan, a national director and technical chairman from Los Angeles. This committee will aid the executive director in interpreting policy matters. Idea also is to give wider representation of membership than in the administrative affairs committee which it replaces.

(2) The country has been divided into 12 regions (excluding Alaska) with a director for each. An expanded board of directors will have the 12 regional representatives, plus three directors at large and the three top officers.

(3) The two C.S.I. publications, the *Construction Specifier* and the *C.S.I. News*, will be combined, and the *Specifier* will become bi-monthly (before it was issued quarterly).

The fact that problems in preparing specifications are not indigenous to the U. S. was brought to the meeting by Robert E. Briggs, president of the Specification Writers' Association of Canada, who addressed the opening session and headed a five-man delegation from the Dominion. Started in 1954, they now have 340 members representing 6 out of the 10 provinces.

C.S.I. started 10 years ago with a nucleus of 45 architects and engineers in Washington. In 1950 there were 600. In the last two years it has had the benefit of evangelistic organizational work by its membership committee, with the roster growing from 1000 to 3000 members in that time. Those belonging to C.S.I. are members (professional people involved in specifications) and associate members (individuals from manufacturing firms who have an interest and knowledge of specifications problems).

Even though C.S.I. is suffering some growing pains because of the pattern of its development, there is, nevertheless an active program going. But of necessity, assignments have had to be parceled out to the various chapters for execution. Since chapter spirit is high, and the attitude one of getting things done, achievement is commendable, but the problem of coordination has been rough for committee chairmen and top officers. In fact several of the chapters have tackled extensive projects at the urging of their own members. Typical are reports by the three California chapters on built-up roofing, structural steel, metal windows and paving.

The technical committee, even before the convention, had assigned a dozen projects to individual chapters. And it was expected that by a month after the Cleveland meeting, that some 25 trade sections would be assigned to chapters. Their job is to write a specification guide for each of these sections which will then be published in the *Specifier*. They have been given a six months' deadline. The specification guides have five parts, and are not to be considered in any way as a standard specification. These are: (1) Work included in the various trade sections, (2) Work excluded, (3) Nomenclature (preparation of an architectural dictionary has been assigned to the N. Y. chapter), (4) Bibliography (investigation of informational sources has been assigned to the Washington, D. C. chapter), and (5) Discussion of materials, methods, etc.

Technical subcommittee appointments made were: Civil Structural and Heavy Industry, Glen Abplanalp (also a director) of New York; General Conditions, Alfred Lea of Houston; Nomenclature, Dave Todd of New York; Bibliography, Ed Pairo of Washington, D. C.

One of the difficulties facing the technical subcommittees and chapters with their trade assignments is the matter of regional differences: what may be economical in one part of the country may not in another; also terminology varies widely. (In fact the N. Y. chapter discovered by means of a "Nomenclature Quiz" that even among its own members there was considerable divergence of opinion on the meanings of various terms). Another factor mentioned at the Technical Committee seminar is that of "pride of ownership." What one chapter does may be difficult to sell to another chapter; it was suggested that this was not serious and perhaps consideration of minority reports might settle this one.

There were seminars on education, legal aspects, regional variances, economic variances, mechanical and electrical specifications, materials and methods and a meeting on the Specifications Consultant and Specifications Methods.

The general feeling prevailing at this convention is perhaps summed up in President Stein's pre-convention challenge: "Today I am more than ever convinced that C.S.I. will be the leader in the Building Industry . . . these words are backed up by a long list of wonderful experiences, occasioned by many recent visits to . . . chapters. The enthusiasm exhibited at meetings . . . excited me beyond any fervor I have ever felt in belonging to any other organization . . . this wanting to do something, to get started, to be told what to do, to right the wrongs we have been practicing for years—gives one the courage to go on, despite the rigorous schedules of the past year."

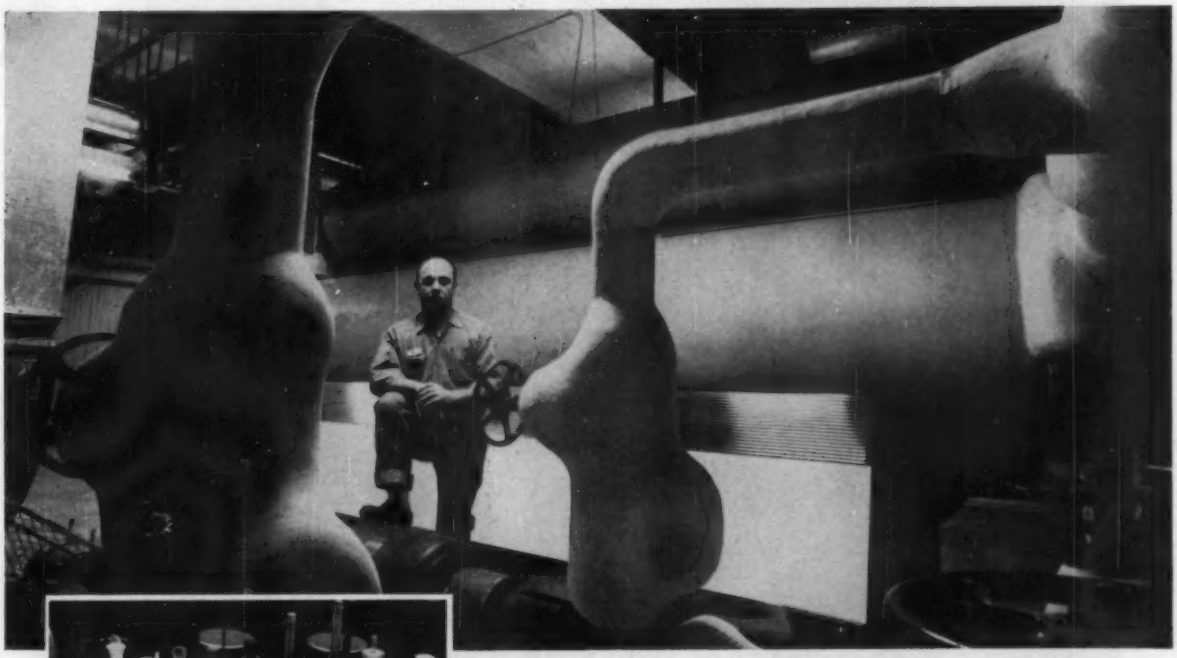
—Robert E. Fischer

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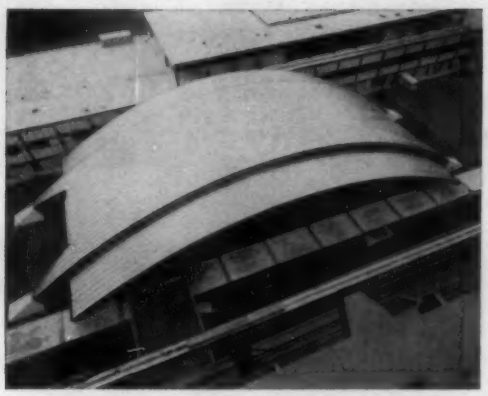
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Architects: Skidmore, Owings & Merrill, New York
Mullions fabricated by: Flouer City Ornamental Iron Co., Minneapolis, Minn.
Roof fabricated by: Overly Manufacturing Company, Greensburg, Pa.

Pilot's-eye view of the Stainless Steel roof covering the New York International Airport's Arrivals Building. Like the Stainless Steel doors in the other picture, the roof will always look new. It was made by Overly Manufacturing Company, Greensburg, Pa.



the age of a Stainless Steel door

Long after every airplane flying today has worn out and been replaced, there will still be a bright, new look to the Stainless Steel doors of New York International Airport's Arrivals Building. Stainless Steel doors are *made* more durable because each door is a solid unit. The steel is weldable, so there are no bolts or rivets to work loose at joints. Hundreds of travelers have already slammed suitcases into these doors but they stay tight and rigid. It's almost impossible to dent or scratch them because Stainless is hard. They won't fade, chip or peel because they're Stainless Steel all the way through—the shine is as deep as the door is thick.

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For character and texture

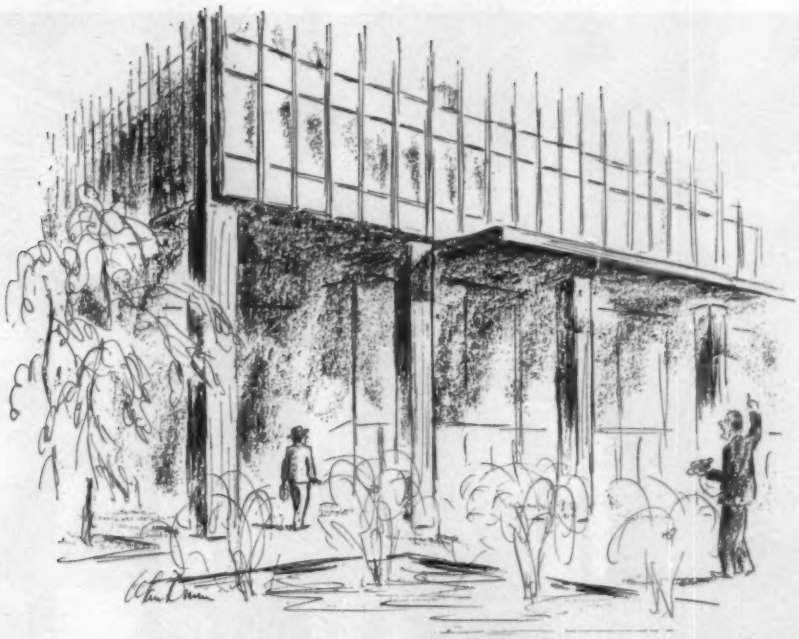
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Meetings and Miscellany



—Drawn for the RECORD by Alan Dunn
"Oh, Mr. Mies! Tenant on the 34th floor brought his own window shades!"

Little Heads New Arizona School

The University of Arizona has announced that the position as Dean of its newly-created School of Architecture will be filled by Sidney W. Little, formerly Dean of the School of Architecture and Allied Arts at the University of Oregon.

Dean Little, in his first statement since assuming the new post, outlined the five-year course leading to the degree of Bachelor of Architecture and said that it will emphasize "design as the major contribution of the architect to the modern world."

The proposed course will be divided into two parts, a two year preprofessional phase which will go into effect this fall and three years of professional training which will become available to students in 1959 and 1960.

The first two years will place only a limited emphasis on problems that relate directly to architecture, seeking instead to create a broad frame of reference. In addition to courses in drawing and design fundamentals, this phase will include a special course by the department of meteorology in climatology as it relates to architecture and a general course in planning to be called "The Determinants of Architecture".

The projected curriculum of the professional phase of the program is planned around three consecutive year courses in architectural design to be accompanied by courses in structural theory and building methods and materials, including a consideration of mechanical equipment under the heading of "Synthetic Climatology."

"Architecture is a design profession," stated Dean Little, summarizing the policy of the new school. "Technology will be considered as a resource for design rather than as an end in itself."

National Housing Code?

Entertaining hopes for the development of a uniform national building code for one- and two-family houses, the American Standards Association has called a general conference for September 9 in New York to sample prevailing opinion of the national groups concerned.

A.S.A. will try to determine whether a consensus can be reached among these groups on the initiation of such a project within its organization.

At a July 23 press conference, Cyril Ainsworth, deputy managing director of the organization, said that while there are one state and four national codes applying to houses, and that conflicts between these codes are very minor, local communities often are confused as to which code they should adopt or incorporate in part in the writing of a new code.

Study Suggests Housing Savings

Ninety-six possible methods of reducing costs in public housing were contained in an interim report recently released by New York State Housing Commissioner, Joseph P. MacMurray. The suggestions covered every aspect of public housing, from the general planning concept and choice of site to structure, materials, mechanical equipment and the administration of the completed project. They represent the preliminary stage of a study of cost reduction being conducted under the direction of Joshua D. Lowenfish, Chief of the State Housing Division's Bureau of Architectural Research.

The keynote of these studies has been the diversity of the sources of information tapped. The bureau sponsored a series of five conferences at Pratt Institute last December involving educators, architects, structural and mechanical engineers, contractors and labor leaders, and representatives of materials producers. These discussions produced a group of suggested economies which were then investigated and correlated by a group of six graduate students at Pratt, working under the direction of Professor John H. Callender.

The State also commissioned six New York architectural schools to undertake research programs aimed at producing savings in the construction of public housing. The studies at Rensselaer Polytechnic Institute, Columbia University and Pratt Institute have involved primarily an investigation into new concepts in planning, with the last named institutions also considering materials and construction as related to planning. More specific investigations were commissioned from three other institutions: from Syracuse University, a study of exterior wall construction as it affects

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consultant on interiors: Florence Knoll
Knoll Associates, Inc., N.Y.C.
general contractors: Turner Construction
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LIFE INSURANCE COMPANY

flooring spec: Armstrong Linotile



LASTING BEAUTY

The recently completed headquarters of the Connecticut General Life Insurance Company have been cited by the AIA as one of the "Ten Buildings in America's Future." The Armstrong Cork Company is proud that Armstrong Linotile—a floor which has been tested in use for many years—was chosen for virtually all the important areas of this most modern building. A single coloring, No. 169 Graphite Gray, is used throughout. Its subtle graining makes a perfect background for the modern architectural features. And because Linotile is regarded as one of the most durable and serviceable of all resilient floors, it will retain its beauty for many years to come.



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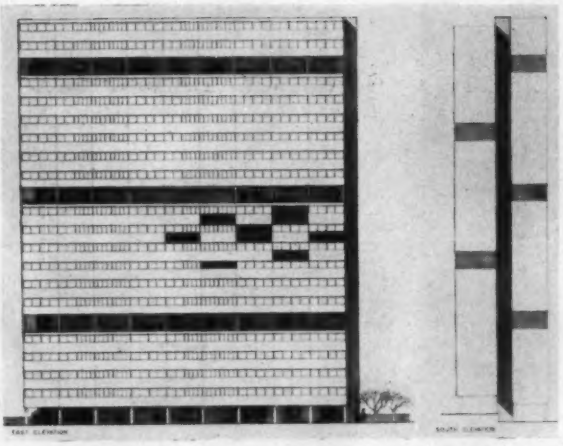
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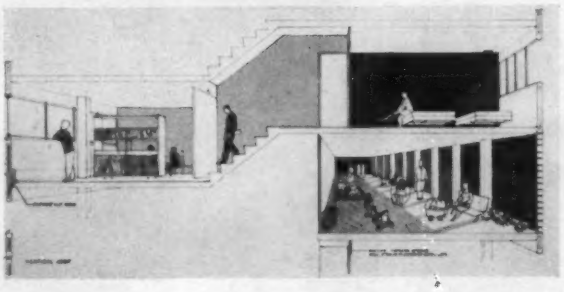
20¢ to 35¢	Linoleum Tile Asphalt Tile, ⅛" (A, B, C, D) Linoleum, light gauge Asphalt Tile, 3/16" (A, B)	35¢ to 45¢	Linoleum, standard gauge Asphalt Tile, 3/16" (C, D) Linoleum, ⅛" ("Battleship") Greaseproof Asphalt Tile Cork Tile, 3/32"	45¢ to 60¢	Corlon (Sheet Vinyl) Linoleum, ⅛" Cork Tile, ⅛" Excelon Tile (Vinyl-Asbestos) ⅛"	60¢ to 70¢	Rubber Tile, ⅛" Cork Tile, 3/16" Linotile Corlon (Hydrocord Back)	70¢ to 90¢	Custom Corlon Tile (Homogeneous Vinyl) 3/32", ⅛" Cork Tile, 5/16" Rubber Tile, 3/16"	95¢ to $1.30	Custom Vinyl Cork Tile Imperial Custom Corlon Tile

heating, from the Housing Research Center at Cornell, a study of structural engineering in skeleton design, and from Polytechnic Institute of Brooklyn, an attempt to find a remedy for the problem of condensation on walls and ceilings.

In a third phase of the program, the Housing Division sponsored two competitions conducted by the National Institute for Architectural Education in which architectural students could present designs for a high rise apartment, and for a basic row house unit. The winning designs were submitted by Eliezer Frenkel, a student at Pratt Institute, and David Basch, a student at Cooper Union. Seymour R. Joseph, commenting for the jury, stated that the competition had suggested provocative ideas for improving housing design, and that providing improved living standards at the same cost is a valid function of studies in cost reduction.

Summing up the program to date, Commissioner MacMurray expressed the hope that, as the studies continued, it would be possible to build mockup apartments and ultimately experimental buildings to provide a final test for suggested innovations in planning and construction.





Prize-winning design in New York State Housing Division Contest: a skip-floor, high rise apartment house by Eliezer Frenkel, a student at Pratt Institute. Above: front and side elevations. Below: section, showing generous corridor space



Prize-winning design in the Row House division: scheme by David Basch, a student at Cooper Union

Better Housing: How?

A Special Report by Bernard Spring

Innovation in construction techniques and the development of new materials is *not* in itself the key to greater value for the consumer's housing dollar. This was the idea that motivated a fresh look at the problems of the housing industry during the two-week special summer program on "The Dwelling House: An Emerging Technology" held at the Massachusetts Institute of Technology in July.

Twenty-one speakers drawn from industry, the design professions, education and the financial world tackeled the problem of bringing the benefits of a new technology to the home buyer. Although the subject of housing was approached from varying points of view, all discussion converged on three central needs: better, more comprehensive management; enlightened land policy and planning; and finally design that will better meet the needs of our new patterns of living.

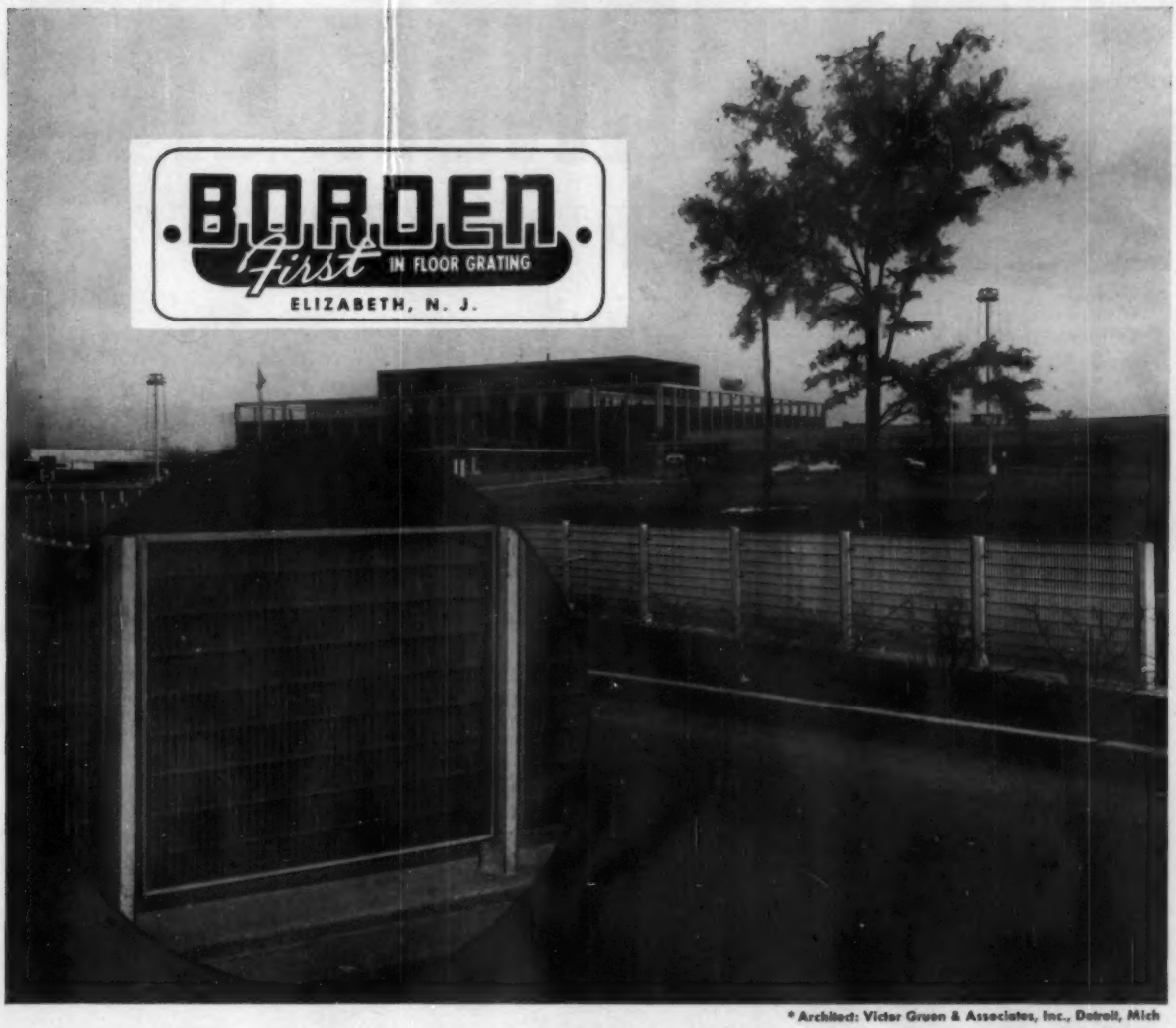
The development of managerial talent with a sound grasp of the diversified points of view that are characteristic of home building was considered a vital need. It was noted that greater savings might be made by a man or team of men able to coordinate the interests of designers, manufacturers, labor, government, bankers, appraisers, consumers and builders than by the most radical improvements in the structure of the house shell. Modern management techniques have only begun to get a foothold in the house building industry. It would appear that far greater productivity can be achieved through further efforts in the direction of comprehensive planning and control of operations than in any other way.

The growing shortage of good building land near metropolitan centers, combined with chaotic suburban sprawl and the disintegration of the old city centers was a related group of problems that received a great deal of attention in the sessions of the summer program. It was generally felt that the tendency toward large scale organizations specializing in land development and able to plan land use for enormous tracts was a hopeful sign. In skilled hands, such large-scale land planning could assure more effective and economical relationships between new housing, community facilities and transportation.

The design quality and livability of the individual house are, to a great extent, predetermined by the way a subdivision's roads and lots are laid out. A number of speakers emphasized the fact that the most effective way to improve the general quality of housing is to focus more creative design talent on land planning problems.

In the course discussions, the point was frequently made that the housing industry has not been as responsive to our country's changing living patterns as have other con-

continued on page 366



* Architect: Victor Gruen & Associates, Inc., Detroit, Mich

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A Washington Report by Ernest Mickel

WILL MISSION 66 BUILDING BE STEPPED UP? PARKS' VISITORS TOP ALL ESTIMATES

Two years of effort in the 10 year Mission 66 program of the National Park Service have seen what officials refer to as "a realistic start" toward providing the facilities so urgently needed. Much has been accomplished, but a vast amount of building construction remains to be done if the nation's parks areas are to be put in first class shape by the time NPS is 50 years old in 1966. That is the objective, and that is why the intensified building program was called Mission 66, and inaugurated in 1956.

The total cost of buildings, utilities, etc., during the whole Mission 66 period has been placed at $215,700,000. Added to this is an estimated cost for completion after 1966 of $44,300,000. The approved construction appropriation for fiscal 1959 is $20 million compared with $17.4 in fiscal 1958.

In a progress report to Congress earlier this year, NPS Director Conrad L. Wirth testified that during the first 18 months of Mission 66, 1838 additional camp sites, 81 additional housing units, nine additional visitor centers, and 327 miles of new or reconstructed park roads and parkways were completed and put into operation. That was before the 1958 construction season got underway.

But while the building schedule is going along at a reasonably satisfactory rate, officials are having some doubts that they planned with sufficient vision in drawing up the Mission 66 program in the first place.

Director Wirth told Congress that visitor use of the park areas is substantially exceeding that contemplated in the Mission 66 study. The result, he said, is that "the strengthened operating programs and new and improved facilities have not provided the relief we had expected by this time."

He pointed out that visitors for the 1957 calendar year totaled 59,284,869 as compared to 50,007,838 for the 1955 calendar year. This represents an increase of 18.5 per cent in two years.

"If this rate of increase continues" he commented, "the level of 80 million annual visitors estimated in the Mission 66 report by 1966 will be reached considerably in advance of that date. Our operating fund requirements in the parks and our physical facility needs are geared to the volume of visitor use."

This situation means that more construction will have to be packed into the remaining years of the 10-year program if the goal is to be achieved.

Describing Mission 66 to the National Geographic Society of Chicago earlier this year, Director Wirth said, "Our objective in all is to give the American people on this Golden Anniversary a park system adequate in all ways necessary for their enjoyment and inspiration, and a park system so managed and so used that our children and our children's children will enjoy the values of this, their estate."

While the architectural staff of the National Park Service continues to do the larger volume of design work in its Philadelphia and San Francisco offices, important work has been assigned outside the Service through commissions to private architects.

Californians figure prominently in the design of major work completed in the Mission 66 program to date. A visitor center at Craters of the Moon National Monument, Idaho, opened recently, was designed by Hurt, Trudell & Capell. Anshen & Allen did the center now operating at Dinosaur National Monument, Utah (see pages 166-171), and Hurt, Trudell & Capell turned out the large visitor center opened in the Canyon Area, Yellowstone National Park. All are of San Francisco.

A fourth project now complete in the Mission 66 schedule is the visitor center at Chalmette National Monument near New Orleans. This is in the old Beauregard House which was restored according to plans by Sam J. Wilson, Jr., New Orleans architect.

Under construction at the present time are several visitor centers for the design of which the Parks Service has gone outside its own offices. These include the following: Moose, Grand Teton National Park, Wy.—architect, G. T. Spenser & Ambrose, San Francisco; Organ Pipe Cactus National Monument, Ariz.—architect, Lescher & Mahoney, Phoenix; Theodore Roosevelt National Memorial Park, N. D.—architect, Germano Milono, San Francisco; Badlands National Monument, S. D.—architect, Lucas, Craig & Whitwam, Rapid City, S. D.; and Chaco Canyon National Monument, N. Mex.—architect, Truman J. Mathews, Sante Fe.

The list of projects currently under construction includes a high school in Grand Canyon National Park, Ariz., designed by Mel Ensign, Phoenix.

Plans are being prepared for seven more visitor centers under private commissions, including that for Gettysburg National Military Park, Gettysburg, Pa., by Neutra & Alexander, Los Angeles, and the project for Death Valley National Monument, Cal., by Welton Becket & Associates, San Francisco.

Others in the planning stage include centers for Mammoth Cave National Park, Ky.—architect, Bellante & Clauss, Philadelphia; Wright Brothers National Monument, N. C.—architect, Mitchell, Cunningham & Giergola, Philadelphia; Bryce Canyon National Park, Utah—architect, Cannon & Mullen, Salt Lake City; Cumberland Gap National Park, Ky.—architect, William Cramp Scheetz, Jr., Philadelphia; and Zion National Park, Utah—architect, Cannon & Mullen, Salt Lake City.

The Gettysburg project, including a cyclorama building to house the famous battle scene painting, is estimated to cost $528,800, taking in, as it does, the visitor center and exhibits. This is one of the more ambitious undertakings shown in the program for this fiscal year. The Zion National Park project carries an estimated cost of $506,700.

Work at the South Rim of Grand Canyon National Park (sewer, water, and underground power systems for camp grounds in the Mather area) is expected to cost $608,500. The old U. S. Mint National Historical site in California is down for building rehabilitation and museum exhibits costing an estimated $600,000.

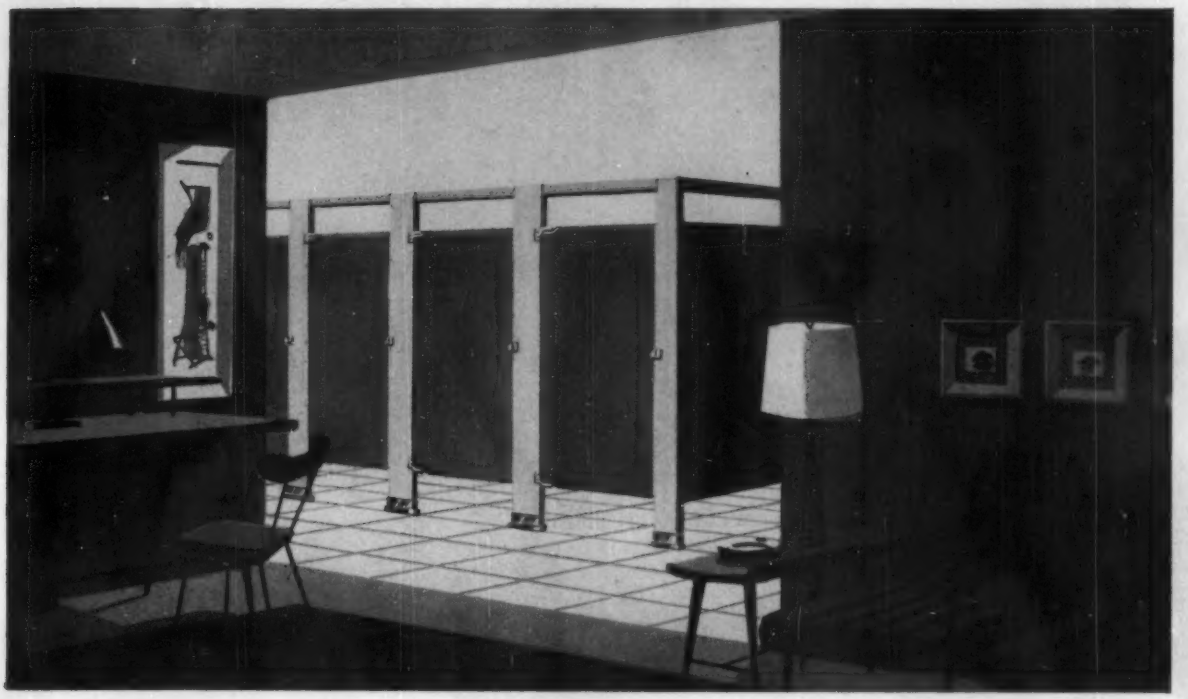
Projects in the Philadelphia area call for a $232,100 landscape development in Independence National Historical Park, and a $400,000 rehabilitation and restoration of Philadelphia Exchange Building No. 14. Those are the larger projects in this year's schedule.

Richard Sutton, NPS acting chief of design and construction, said NPS expected to have 17 new visitor centers under contract by next July 1. Twelve are either under construction or being planned at the present time.

This activity means that NPS is just about on schedule with its Mission 66 building program. There was a fear earlier this year that design and construction, and all the factors involved in Park improvement, might fall seriously behind the stated objectives. But that was before the Administration enunciated its new policy of stimulating outlays in the public works and associated fields as an anti-recession move.

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News from Canada by John Caulfield Smith

FOUR NEW PROJECTS AND PILKINGTON COMPETITION WINNER

1. Sun Life Building (left, final design; right, early proposal), Ontario headquarters for Sun Life Assurance Company; John B. Parkin Associates, Architects and Engineers. The 14-story building will have central service core, exteriors of glass and anodized aluminum, paved forecourt at main entrance. 2. Canadian Head Office for Prudential Life Insurance Company of America, Toronto; Page and Steele and Peter Dickinson Associates, Architects. To be built at an estimated cost of $12 million, the 20-story building will be erected for Prudential by Tusca Investments Ltd. and occupied by Prudential under a long-term lease. It will contain 350,000 sq ft of floor area, fronting 157 ft on King Street and 142 ft on Yonge Street. Exteriors will be clear glass with bronze trim for the first four floors, glass and quartz-and-granite panels separated by vertical fins of stainless steel for the 16 tower floors.

1

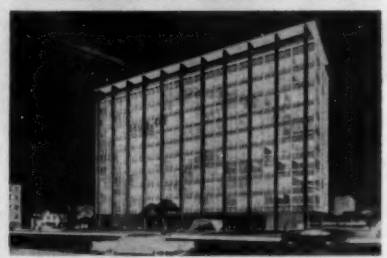




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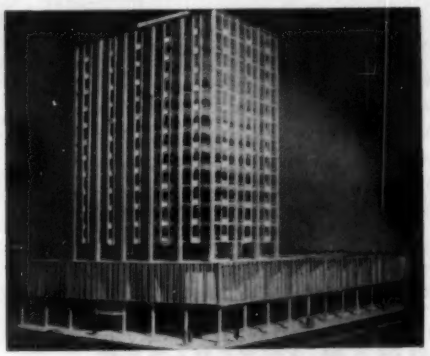


3



3. Head office, Union Carbide Canada Ltd., Eglinton Avenue East, Toronto; Shore and Moffat, architects; Anglin-Norcross Ontario Ltd., general contractor. An 11-story building with gross floor area of 180,000 sq ft, it will cost an estimated $5.5 million, including two-and-a-half-acre site. The building has been designed on a five-ft module with no interior columns; all partitions will be movable. Exteriors will be glass, metal and granite. 4. The design, for "a civil courthouse for Montreal," which won the twelfth annual Pilkington Traveling Scholarship for Harvey Wolfe, 23-year-old McGill University architectural student. 5. School of Architecture, University of Manitoba; Smith Carter Katelnikoff Associates, architects and engineers; North American Buildings Ltd., general contractor. Facilities will be provided for 300 students of architecture and allied arts at an estimated cost of $883,000. Exteriors are precast concrete, glass and aluminum. Completion is scheduled for the 1959 fall term

4



5



McGill Architectural Student Wins Pilkington Award

The twelfth annual Pilkington Traveling Scholarship, increased this year from the former $1500 to $2500, has been won by Harvey Wolfe of Montreal, 23-year-old architectural student at McGill University. Second prize of $200 went to Rodrique Guite of Ecole des Beaux Arts, Montreal; third prize of $100 to P. H. Warren of the University of Toronto.

Competitors for the Pilkington award are two students from each of the five Canadian schools of architecture, each nominated by his own school.

In a written report, E. J. Smith, Winnipeg architect and chairman of the judges, noted "a notably lower standard in the problems submitted this year," but called Mr. Wolfe's entry (see model photo) "a competent design of urban architecture, well studied for the site and its relation to the surrounding complex of older buildings."

University of Manitoba Builds New School of Architecture

Under way on the campus of the University of Manitoba is a new building for the School of Architecture. Architects are Smith Carter Katelnikoff Associates; general contractor, North American Buildings.



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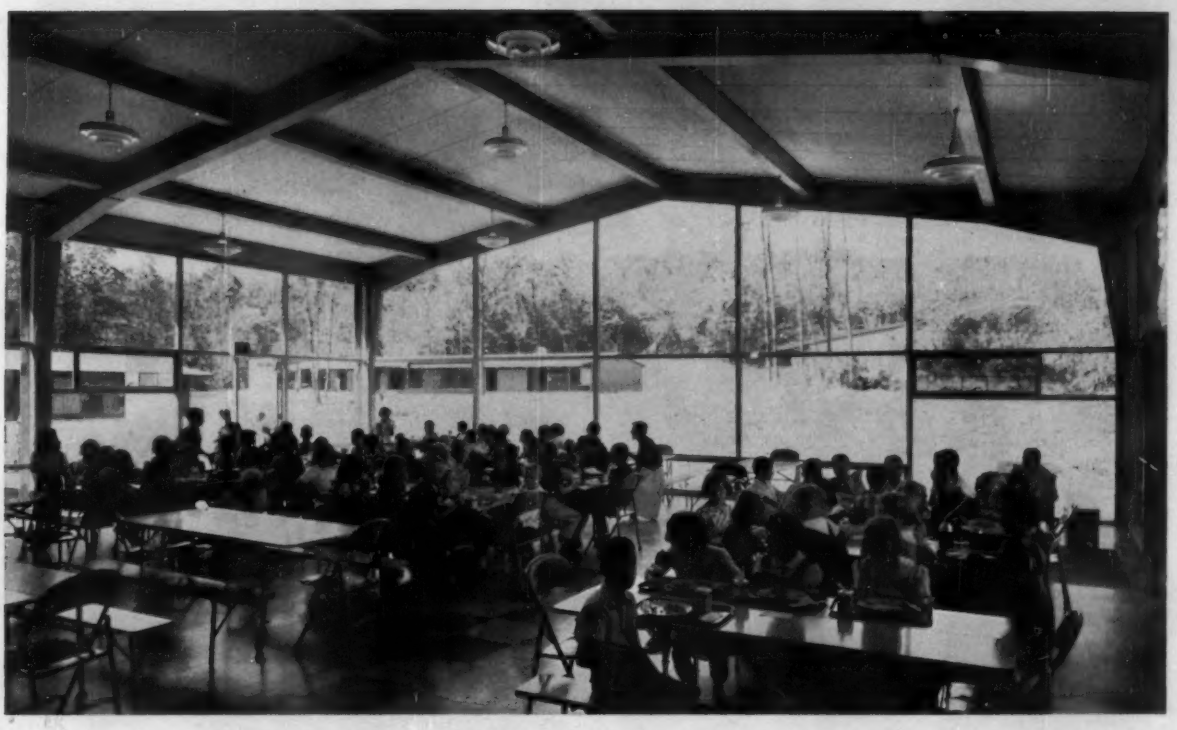
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Warren H. Ashley, Architect — *Ames Construction Company, General Contractor*

This photograph, made with natural lighting, makes an interesting demonstration of the value of large glass wall areas in schoolrooms.

This cafeteria is typical of many rooms in this large school. In creating its window walls the architect specified Hope's Pressed Steel Subframes attached directly to the structural steel work. The unusual shape of the gable gives evidence of the complete freedom enjoyed in the layout and placing of all wall elements, glazed areas, insulated panels, louvers and projected ventilators. The provision made for doors in the subframes is shown in the photograph at the far side of the room.

Hope's Heavy Intermediate Projected Steel Windows and pressed Steel Subframes were used throughout this modern school. Their outstanding quality assures endurance with perfect operation for the life of the building at the lowest expense for up-keep.

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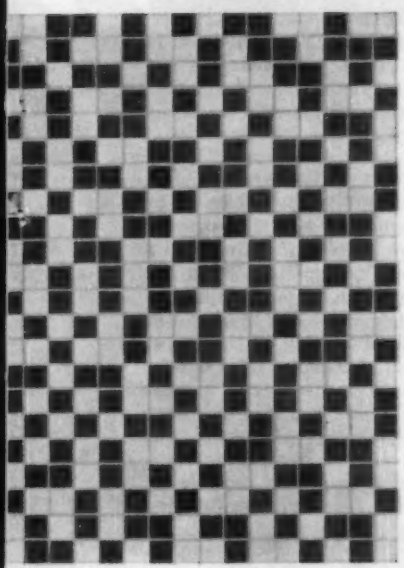


FIRESTONE SALES-SERVICE STORE
Akron, Ohio

Architects:
WILLIAM F. KINKOPH — D. W. GOODWIN
The Firestone Tire & Rubber Co., Akron, Ohio

General Contractor:
J. G. RUHLIN CONSTRUCTION CO.
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Close-up shows 1" x 1" Romany • Spartan tile in a random 50/50 mixture of Spartex White and Decorator Cherry Red.



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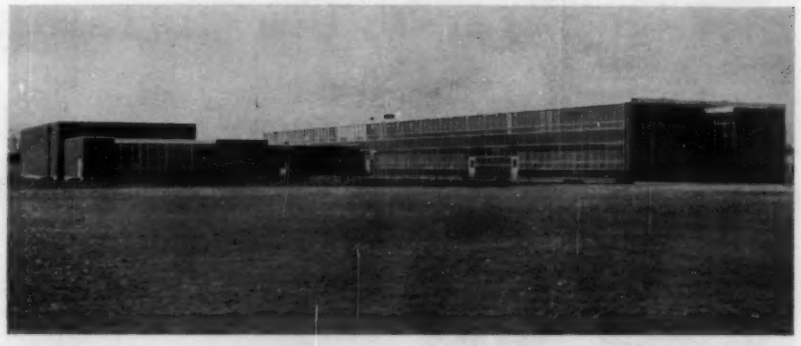


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To be built at an estimated cost of $883,000, including furnishings, the building will have library, staff offices and seminar rooms, assembly and exhibition space on the first floor; drafting areas, storage, washroom facilities and a student lounge on the second floor; and areas for sculpture, freehand drawing, photography, workshops, studios and mechanical and storage facilities.

Exterior steel columns are to be covered with precast concrete panels, and the curtain wall area of aluminum with opaque and transparent glass infill panels. The main level is raised six ft and cantilevered at either end over the basement wall. Overall dimensions of the building are 210 ft by 120 ft.





1

Four new schools by Meech, Mitchell, Robins and Associates, of Lethbridge, Alberta —1. Paterson Junior High School; 2. Wilson Junior High School; 3. St. Francis Boys' High School



2



3

Architects Urged to Consider More than Single Buildings

A plea for better city design was made by Eric W. Thrift, director of the Winnipeg Metropolitan Planning Commission, when he participated in an urban redevelopment symposium at the recent Assembly of the Royal Architectural Institute of Canada.

Describing city design as a combination of civic planning, architecture and business administration, Mr. Thrift stated that redevelopment requires designers capable of encompassing these responsibilities within their understanding, at least, if not entirely within their individual competence.

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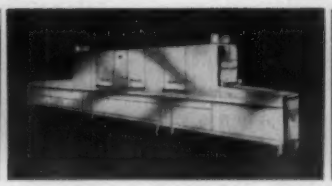
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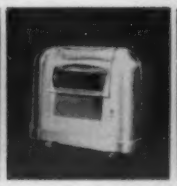
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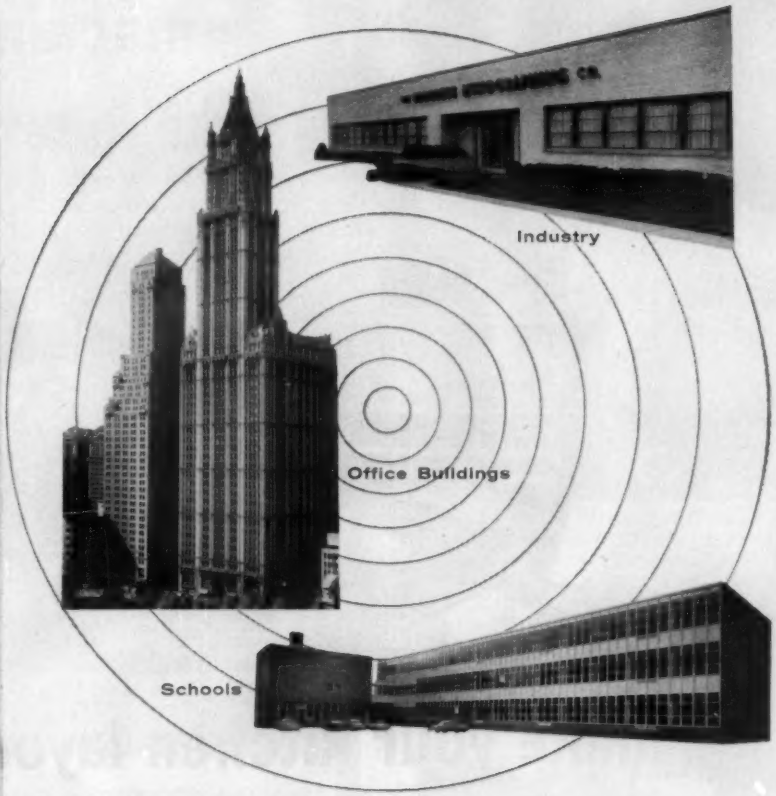
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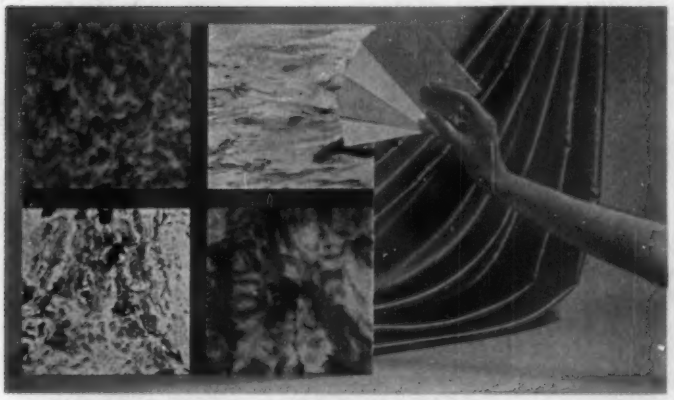
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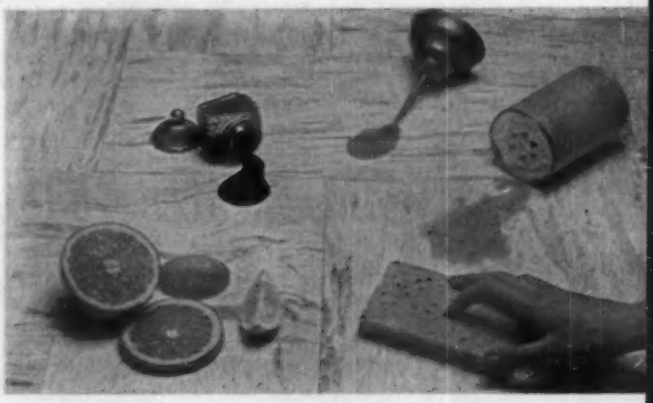
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"It is a peculiar challenge," he said, "which few of us may be prepared to meet. . . . What we are faced with is not the design of some individually good buildings, but the successful and satisfying combination of the design of such buildings, the space which they create, and the relationship which these buildings and their spaces have to the urban structure around them."

Mr. Thrift voiced regret that in recent decades there has been a decline in the art of skillfully creating effective, attractive, character-building open space. Such space, he observed, gives citizens the visual atmosphere through which they gain their impressions of their community.

"We understand too little about these impressions," he continued. "What creates people's ideas, what has meaning to them, may lie a long way from what we, as architects, think are the most important elements. What these ideas and understanding may be, we must try to comprehend. Here design must be applied with humble sensitiveness if we are to end up with a new piece of urban fabric carefully woven into the structure of the city."

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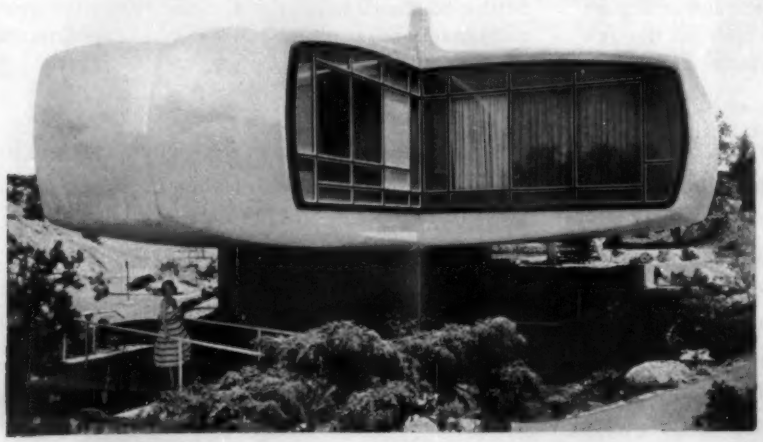
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Toronto Names Howarth to Head School of Architecture

Dr. Thomas Howarth, formerly senior lecturer and assistant to the director of the University of Manchester, England, has been appointed professor and director of the School of Architecture at the University of Toronto. Dr. Howarth succeeds H. H. Madill, who retired last year.

Dr. Howarth, who had been on the architecture faculty at Manchester since 1946, has been active also as an author and lecturer. His major work, "Charles Rennie Mackintosh and the Modern Movement," won the Annual Book Award of the Society of Architectural Historians, and the Alice Davis Hitchcock Memorial Plaque, in 1954. Another book, "Tiles, Faience and Mosaic in Modern Buildings," is soon to be published; and two more are in preparation—"Nineteenth and Twentieth Century Architecture," a fifth and entirely new volume for H. M. Simpson's standard work "A History of Architectural Development," now being revised; and "Architectural Education," a comparative study of American and British teaching methods based upon an investigation made in the U. S. under a Rockefeller Foundation grant in 1955-56.

A 1939 graduate in architecture and town planning of the University of Manchester, Dr. Howarth received his Ph.D. at Glasgow University in 1949. He was a lecturer in architecture there from 1939 to 1946.

Architectural Awards Given for Boiler House Design

Donald E. Skinner of Port Credit, Ont., associated with the Toronto architectural firm of Venchiarutti and Venchiarutti, received the $2000 first prize in the national architectural competition for the design of a boiler house. The competition, sponsored by the Bituminous Coal Institute of Canada, was open to graduates of recognized Canadian schools of architecture in the employ of registered architects in Canada.

Second prize winner, who received $1000, was W. W. Rennie of Vancouver. Associate engineer awards were given to W. P. Smith of McGregor & Beynon Ltd., Toronto, and D. B. Leaney of North Vancouver.

News Notes

George A. Stewart has been elected president of the Manitoba Association of Architects for 1958-59. Vice president is James Searle, and coun-





Another achievement in curtain-wall . . .

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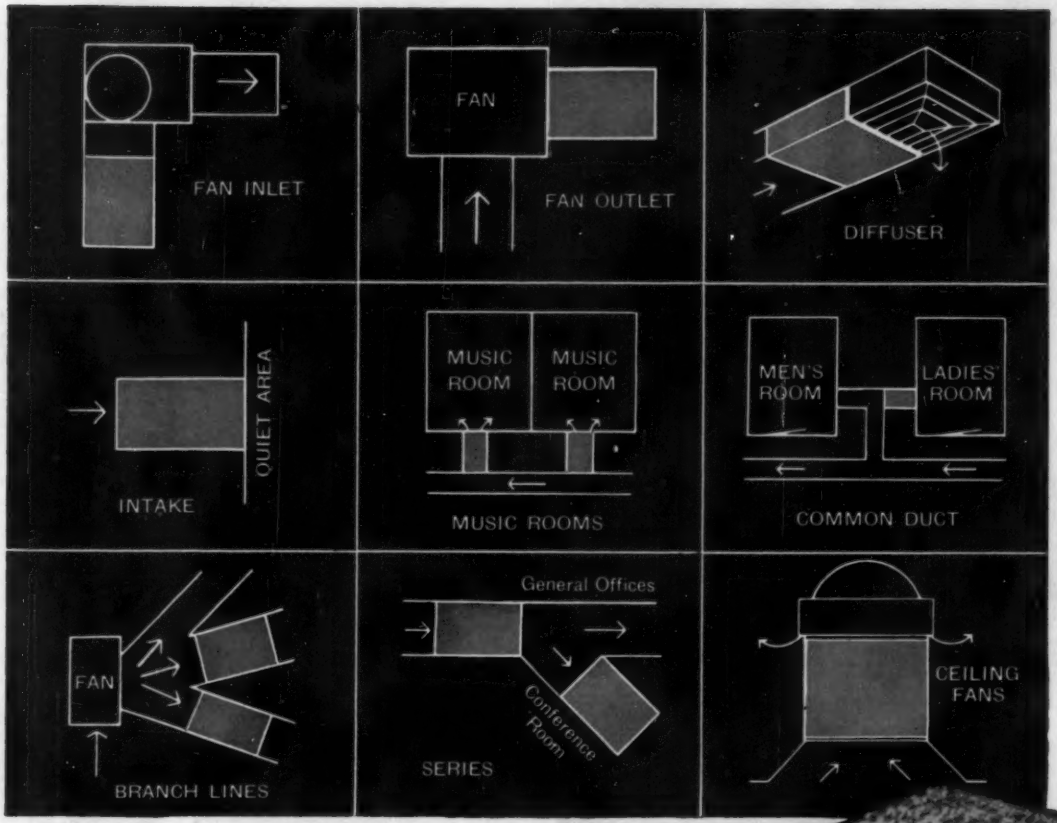
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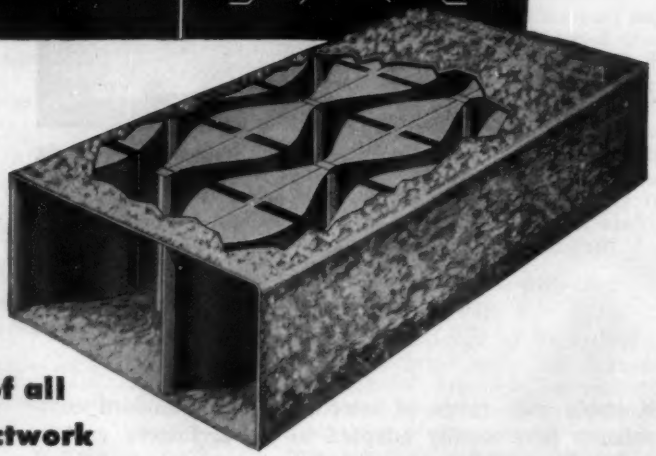
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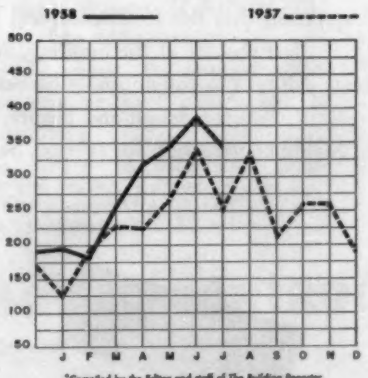
Huntington, Indiana • Philadelphia 35, Pennsylvania • Toronto 2, Ontario

News from Canada

cillors are Morley Blankstein, Lawrence J. Green, R. Bryan Ross, Roy Sellors, Ernest J. Smith, Ralph L. Thompson, Eric W. Thrift, Nikola M. Zunic, and N. C. H. Russell (*ex officio*). Executive secretary remains Mrs. Douglas Chevrier. . . . The Architects' Materials Center of the Architectural Institute of B. C. opened at 1425 West Pender Street, Vancouver, last month. Technical information officer is Peter Kearney. . . . As the result of a housing conference recently sponsored in Ottawa by the Canadian Construction Association, representations have been made to the Federal government calling for financial assistance in the installation of "big pipes" for water and sewerage in low cost housing areas. . . . Maurice Payette, R.A.I.C. president, was honored at the recent annual meeting of the American Institute of Architects in Cleveland. He received the award of an honorary fellowship at the annual dinner. . . . Lakehead Chapter of the O.A.A. will host a meeting of the Association Council in Fort William, September 12-13. Wallace A. M. Kyro is local chairman. . . . Two new scholarships are available to graduates of l'Ecole des Beaux-Arts, Montreal. The Foundation Fernand Prefontaine will donate $100 annually, and André Francou of Auch, France, has willed 15 million francs to be awarded each year for study in France. . . . A Society of Architectural and Engineering Technicians has been formed with the approval of the A.I.B.C. and the Professional Engineers' Association of B. C. Objectives include the organization of draftsmen to achieve proficiency classifications for themselves with minimum wages set for each category. First president is J. I. Thompson.

Contracts Awarded: Comparative Figures

(in $ million)



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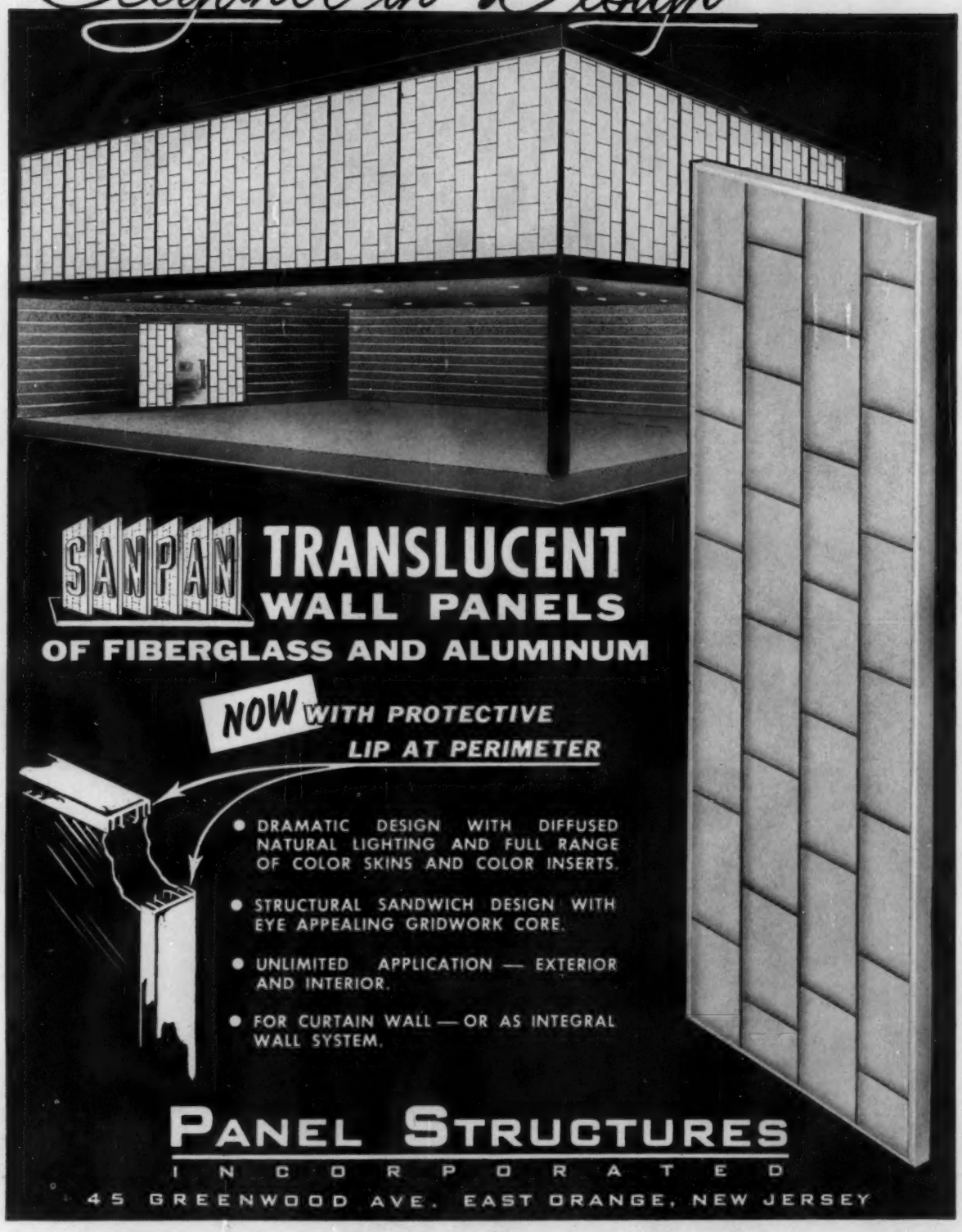
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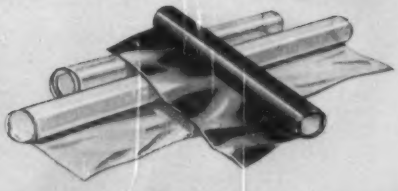
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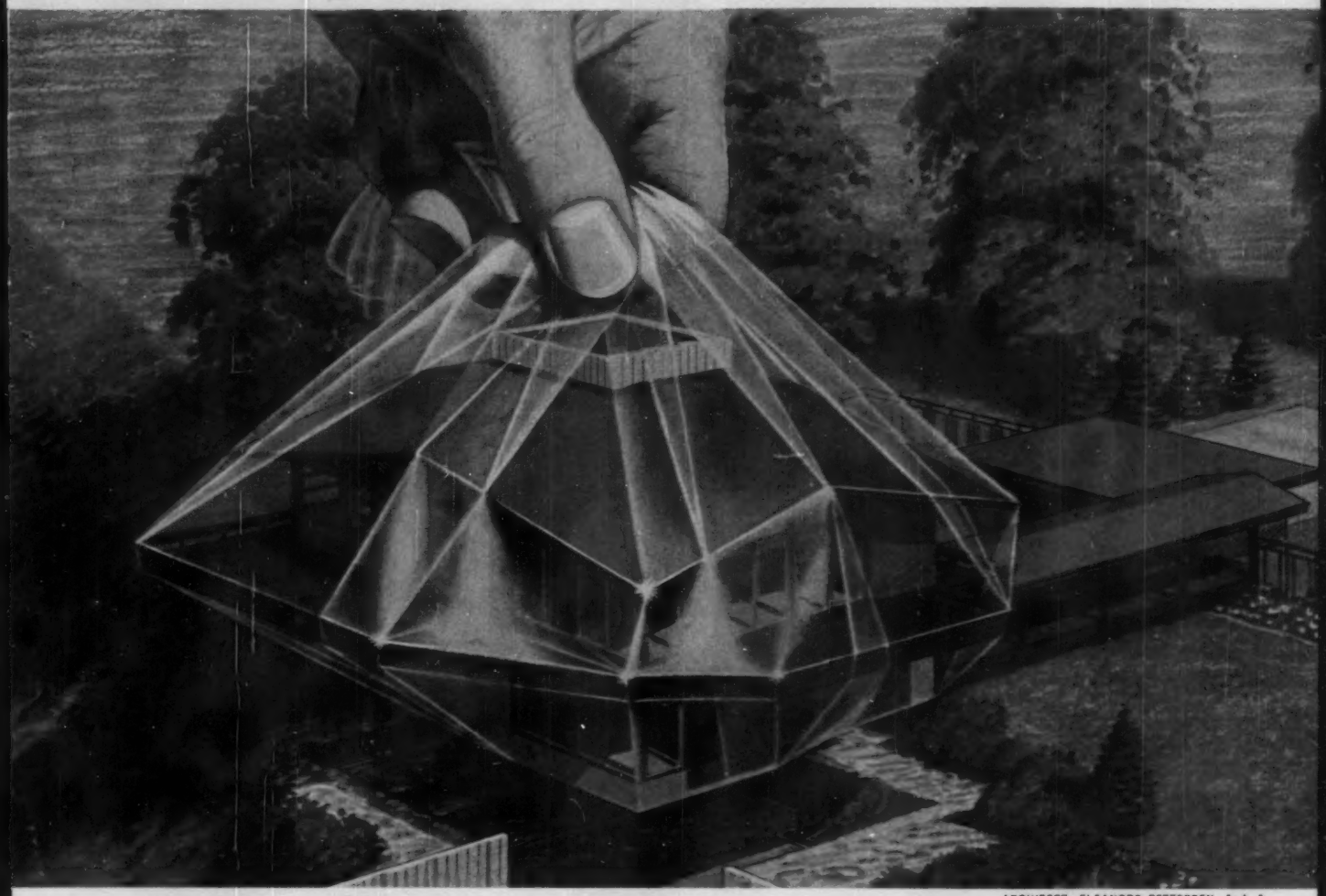
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Report Calls for Expansion of Medical School Facilities

Looking a dozen years into the future, consultants to the Secretary of Health, Education, and Welfare have reported that unless construction funds for medical research and training become available on a much larger scale, needs of the nation for research workers will not be met.

A lengthy report handed Secretary Marion B. Folsom in July dealt with the advancement of medical research and education through HEW. Part of it was directed toward the problems of physical facilities.

The on-coming wave of college students, it said, will generate construction needs of unprecedented dimensions. The special facilities requirements for medical education and research must be viewed in the perspective of the much larger total demand for construction of all kinds of facilities for higher education.

Ten prominent medical educators and industry research executives participated in the study. They were appointed a year ago. Chairman of the group was Dr. Stanhope Bayne-Jones, formerly dean of the Yale University school of medicine, president of the Joint Administrative Board of the New York Hospital-Cornell Medical Center, and technical director of research, Office of the Surgeon General, Department of the Army.

The report stressed need for an immediate start on an expanded program of medical school construction in these words: "Unless a large construction program designed to expand markedly the facilities of the nation's system of medical and related schools is undertaken in the immediate future, the total medical research effort of the nation will be impeded and the number of doctors per 100,000 population will begin to decline in the near future."

The report posed the problem in two parts—improvement of existing facilities and construction of new schools. It called for expansion of the Health Research Facilities Construction Act. If this law is permitted to expire, extensive research construction needs will remain unmet, it added.

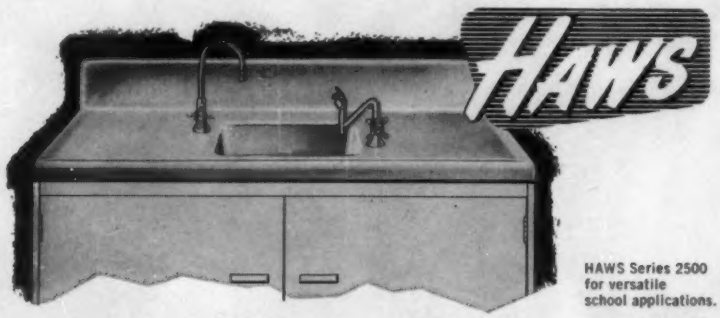
There is on hand $61 million in currently approvable projects which cannot be financed, it was pointed out. This represents at least $122 million in total medical research construction needs, since each Federal dollar must be matched by a local dollar. Because these figures relate only to projects on hand, the total national needs are considered to be substantially greater.

There was reference to "much larger capital investment" to build 14 to 20 new medical schools. A new school of this type is said to require a capital investment of from $35 to $50 million. The consultants claimed that the total cost of new medical school construction required to sustain today's population-physician ratio would range between $500 million and $1 billion. About 10 years typically elapse between the planning of a school and production of the first graduates.

"Even if funds in the order of $500 to $1 billion were made available immediately for construction of new medical schools, it seems certain that the number of physicians per 100,000 population will decline between now and 1970," the report continued.

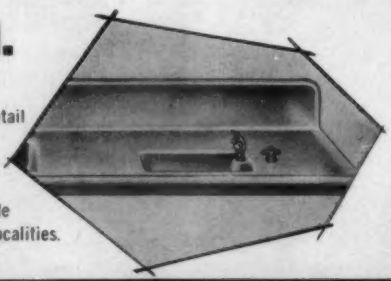
The consultants told HEW that unless construction funds become available on a much larger scale than has been contemplated, the output of physicians will not keep pace with population growth and the needs of the nation for research workers will not be met.

continued on page 350



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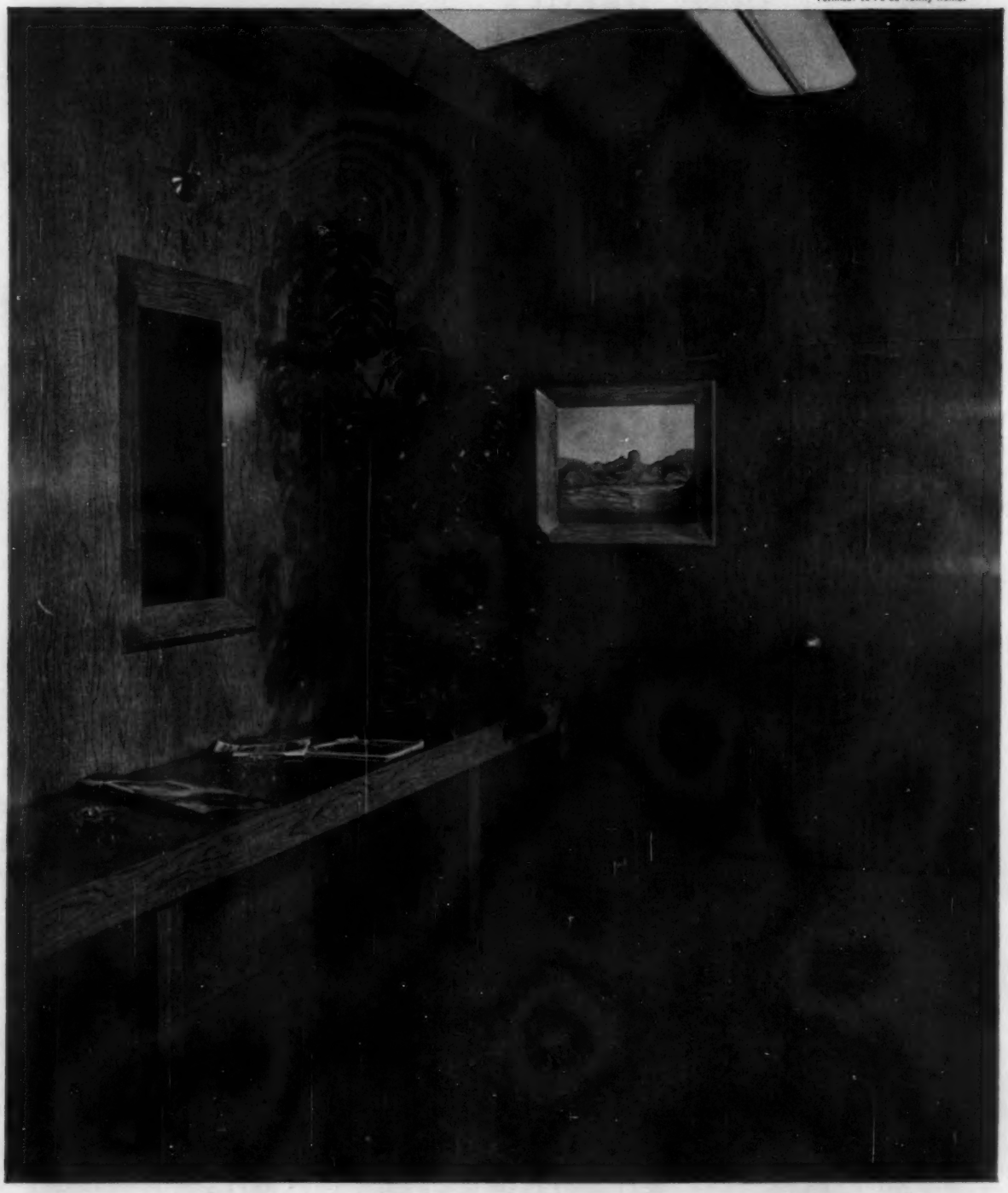
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Construction Cost Indexes

Presented by Clyde Shute, Director of Statistical Policy, Construction News Div., F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assoc. Inc.

Labor and Materials: U.S. average 1926-1929=100

NEW YORK

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS, OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.6	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	274.9	271.8
1952	278.2	274.8	271.9	265.2	262.2
1953	281.3	277.2	281.0	286.0	282.0
1954	285.0	278.2	293.0	300.6	295.4
1955	293.1	286.0	300.0	308.3	302.4
1956	310.8	302.2	320.1	328.6	324.5
1957	318.5	308.3	333.1	345.2	339.8
Apr. 1958	319.5	307.9	337.6	351.9	346.7
May 1958	319.5	307.9	337.6	351.9	346.7
June 1958	323.7	312.3	242.9	356.9	349.8
	% increase over 1939				
June 1958	162.1	155.1	85.8	167.5	168.9

ATLANTA

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS, OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
1953	223.0	224.6	221.3	221.8	223.0
1954	219.6	219.1	233.5	225.2	225.4
1955	225.3	225.1	229.0	231.5	231.8
1956	237.2	235.7	241.7	244.4	246.4
1957	241.2	239.0	248.7	252.1	254.7
Apr. 1958	241.2	237.5	252.0	257.8	258.6
May 1958	241.2	237.5	252.0	257.8	258.6
June 1958	241.0	237.3	251.8	257.7	258.5
	% increase over 1939				
June 1958	179.2	185.5	164.8	164.6	173.0

ST. LOUIS

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS, OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
1953	263.4	256.4	259.0	267.0	259.2
1954	266.6	260.2	263.7	273.3	266.2
1955	273.3	266.5	272.2	281.3	276.5
1956	288.7	280.3	287.9	299.2	293.3
1957	292.0	283.4	295.2	307.1	302.9
Apr. 1958	296.6	287.3	304.9	319.0	314.0
May 1958	296.6	287.3	304.9	319.0	314.0
June 1958	297.6	288.3	306.2	320.0	315.0
	% increase over 1939				
June 1958	170.0	169.4	158.0	167.1	164.7

SAN FRANCISCO

PERIOD	RESIDENTIAL Brick	RESIDENTIAL Frame	APTS., HOTELS, OFFICE BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Concrete	COMMERCIAL AND FACTORY BLDGS. Brick and Steel
1930	90.8	86.8	100.6	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
1953	255.2	257.2	256.6	261.0	259.7
1954	257.4	249.2	264.1	272.5	267.2
1955	268.0	259.0	275.0	284.4	279.6
1956	279.0	270.0	288.9	298.6	295.8
1957	286.3	274.4	302.9	315.2	310.7
Apr. 1958	285.7	271.2	305.9	320.5	315.2
May 1958	288.9	273.0	310.9	327.7	321.0
June 1958	290.3	275.0	312.9	329.1	322.5
	% increase over 1939				
June 1958	174.9	176.9	166.5	170.0	176.8

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

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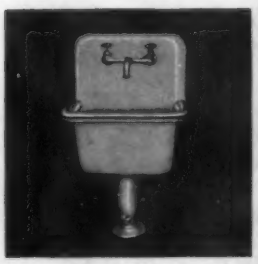
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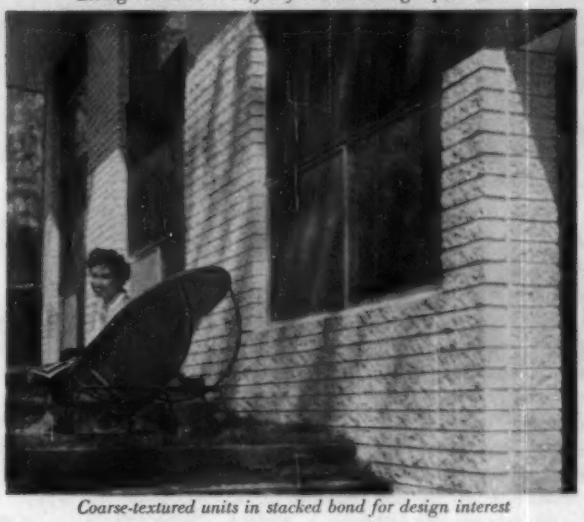
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Houses At Home And In Japan

By Jonathan Barnett

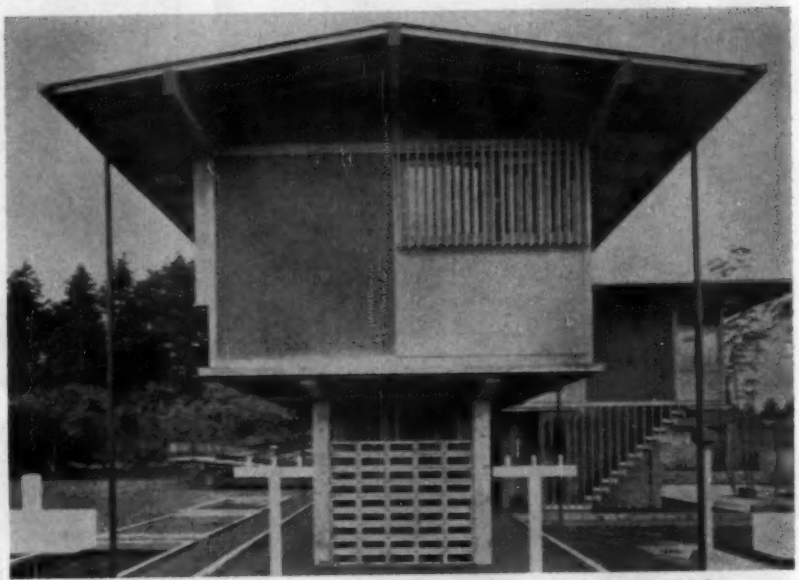
These two recent books on domestic architecture form a significant addition to the literature of the field. *The House of Your Dreams* is a guide written for the prospective home builder or buyer which, unlike many books of its kind, combines an imaginative approach to architectural design with a clear, practical discussion of the manner in which the design can become a reality.

The basic emphasis is placed on an understanding of the principles of the design process. Instead of presenting a large selection of floor plans, Mr. Kirkpatrick introduces the reader to the concept of the schematic analysis of planning needs and then shows a single floor derived from such an analysis. Plans are compared only to illustrate specific points in the detailed discussion of each area of the house.

The same emphasis on principles as well as information can be seen in other sections of the book. The chapter on insulation begins with a discussion of heat and its characteristics, and color and sound control are treated in a similar manner, the analysis proceeding from the theoretical to the practical. An attempt is made to illustrate each significant point with diagrams and tables which also serve to enhance the book's value as a reference work.

In addition to the chapters on the house itself there is a very complete

continued on page 63



A Japanese building that incorporates Western ideas: house in Noda by Hiroshi Oe

The House of Your Dreams: How to Plan and Get It. *By W. A. Kirkpatrick. McGraw-Hill Book Co., Inc. (New York), 1958. 198 pp., illus. $5.50.*

Japanese Houses Today. *Edited by I. Yamawaki, K. Yamakosi, M. Katsumi, T. Saito. The Asahi Shimbun (Tokyo), 1958. 236 pp., illus. $16.00.*

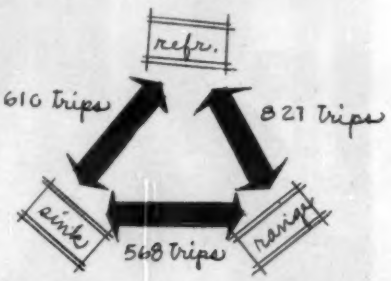


Diagram showing use relationship of kitchen appliances, one of many illustrations from THE HOUSE OF YOUR DREAMS

figure 8.8

Americans Design For Leisure

By Grace M. Anderson

There seems to be no doubt that the prospect of abundant leisure is staring Americans right in the face. It is an unhappy fact that this seeming blessing should pose a number of problems for us—all of them offering a direct challenge to the organizational and artistic abilities of the architect.

One of these problems is to provide more and more facilities to absorb a population bent on pleasure. Another, and perhaps more basic, problem is to teach Americans to relax—or trick them into it. For the truth is that the work-oriented Americans have *not* learned to accept their leisure. When we do really relax—perhaps collapse is the word—we usually stop unimaginatively with beer in the backyard, a lovely occupation once in a while, but hardly stimulating, or very good for the figure.

Beer in the backyard can be made stimulating, of course, but it cannot be made good for the figure; and this is one of the worrisome things about American recreation. It is, when all is said and done, *too* passive—even doing something generally means getting there in the automobile. The disturbing results of the Kraus-Weber tests, carried out to determine the comparative physical fitness of young adults here and in Europe, appear to show that we are indeed becoming a nation of "softies." As a spot check, take a look at the local beach or swimming pool: children swim and dive, adults lie around in the sun.

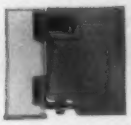
The problem of injecting variety into our national amusements is tack-

continued on page 63

Recreation Places. *By Wayne R. Williams. Reinhold Publishing Corp. (New York), 1958. 302 pp., illus. $18.00.*

Recreation Areas: Their Design and Equipment. *Prepared for National Recreation Assn. by George D. Butler. Ronald Press Co. (New York), 1958 (2nd ed.). 174 pp., illus. $6.00.*





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STANDARD LIFE INSURANCE CO., INDIANAPOLIS, INDIANA
Architect: Skidmore Owings & Merrill—
Contractor: Wm. P. Jungclaus Co.

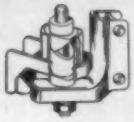
CONEMAUGH VALLEY MEMORIAL HOSPITAL, JAMESTOWN, PA.
Architect: L. F. Freicht Associates—Contractor: Jim Cullen

BRANIFF AIRWAYS MAINTENANCE HANGAR, DALLAS, TEXAS
Architect: Mark Lemmon / Pereira & Luckman—
Contractor: J. W. Bateson Co.

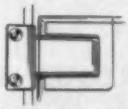
SHOPPING CENTER, GRETNA, LOUISIANA
Architect: August Perez & Associates—
Contractor: Keller Construction Corp.

FLINT PUBLIC LIBRARY, FLINT, MICHIGAN
Architect: Louis C. Kingsott & Associates—
Contractor: Taylor & Gaskin Co.

G.S.A. REGIONAL OFFICE BUILDING, WASHINGTON, D.C.
Architect: General Services Administration—
Contractor: Joseph B. Bahen Construction Co.



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by Hellmuth, Obata & Kassabaum

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CERAMIC tile

Required Reading

continued from page 60

Houses . . .
discussion of the process of choosing a neighborhood and a lot, including a description of the legal and financial steps involved in a property transaction and lessons on how to read a site plan and a deed.

The text is clear, unimpassioned, and sensible throughout, and any client who reads it should come to the architect with a clearer understanding both of what he wants and of the way in which the architect will help him to achieve it.

The compilation of contemporary Japanese domestic architecture is essentially a picture book. There is a certain amount of text, in English, fortunately, as well as Japanese, but it is neither very complete nor very accessible, consisting of a few short articles at the back of the book. The pictures themselves are excellent and very well reproduced, but they are categorized in such a way that it is impossible to form a clear idea of any particular building. The book can therefore be read only at a rather superficial level, its principal value being that it enables the architect to compare his knowledge of the influence of Japanese architecture on Western technology with the influence of Western technology so clearly visible in this Japanese architecture.

Such a comparison is rather instructive. Many of the Japanese examples retain a sensitivity to the possibilities of natural materials which is absent in the more formalistic designs of the West, and the way in which such technological banalities as kitchen and bathroom equipment are treated should suggest some intriguing possibilities to the architect.

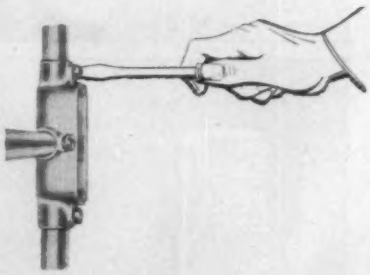
Many of the houses illustrated are very handsome indeed; and the photographs, some of them in color, make this book a thing of beauty. Within certain very definite limits it is useful too.

Recreation . . .
led pretty thoroughly in Mr. Williams' book (which in some ways, particularly in its illustrations, proves to be a recreational object in its own right). Essays by a number of people involved in recreational programs around the country treat of leisure in terms of history, age groups, types of recreation, and geography. Other sections cover planning programs, assessing community needs, facilities, and equipment.

Mr. Butler's book is more "prac-

continued on page 386

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ARCHITECTURAL RECORD *Western Section*©

EDITOR: *Elisabeth Kendall Thompson, A.I.A.*
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Architecture as Creative Art

In a radio interview* last winter, Artur Rubinstein commented so perceptively on creativeness that what he said should have been heard by everyone who has to do with a field of creative activity. Heard, and written in fire on their hearts.

For architects, what he had to say is particularly allusive; the similarities between architecture and music are more real and more numerous than are the differences. In both these arts interpretation of the created thing is required; both musical composition and architectural drawing are "instruments of service," both must be executed to have meaning to society. And music in part, and in its own particular way, is a social art, even as architecture.

Creating music, said Mr. Rubinstein, "resembles the creation of the universe—our creation—the whole. And there we are, the interpreters, with it—the created music—before us to interpret according to our own, always individual, talents. The same thing applies a little bit to having your portrait done by Raphael, Leonardo, Titian, Picasso, Dali, and anyone else. Each will swear that you couldn't look otherwise to him, and yet in the portraits you would always seem to be a different person. This is what gives you the right to play a sonata by Beethoven completely differently from any one else even while following exactly the text and trying to be as honest about it as possible but with your own talents."

"You see, music is divided in two parts: there is by necessity the creator of music and by the same necessity, the interpreter. And while music is, as Nietzsche called it, a Dionysian art—eruptive, dynamic—interpretation is an Apollonian art—descriptive, speaking of something in the third person."

Although the whole analogy may be tenuous, the parallels are there: architecture must be creative and at the same time interpretive, Dionysian and Apollonian; and the "right to play the sonatas differently" is inherent in it. Could two architects ever design identically for the same set of conditions? Isn't architecture the creative interpretation of a set of conditions?

But when Mr. Rubinstein spoke of Chopin, he summed up for architecture as much as for music the essence of the difference between what is creative and what is useful. He said:

"You see, Chopin, who is a genius of the piano, created a style which is unique because other composers translated their ideas for the utility of the piano whereas Chopin felt, lived and dreamed piano."

This is the theme of the California Council, A.I.A. convention next month—the soul of architecture, its apprehension, comprehension and expression. For too long such discussion has had only token notice in these convention programs. It is good that architects should concern themselves in serious contemplation with architecture's first obligation: the expression in form and line, mass and volume, texture, light and color of their own "feeling, living and dreaming" of architecture.

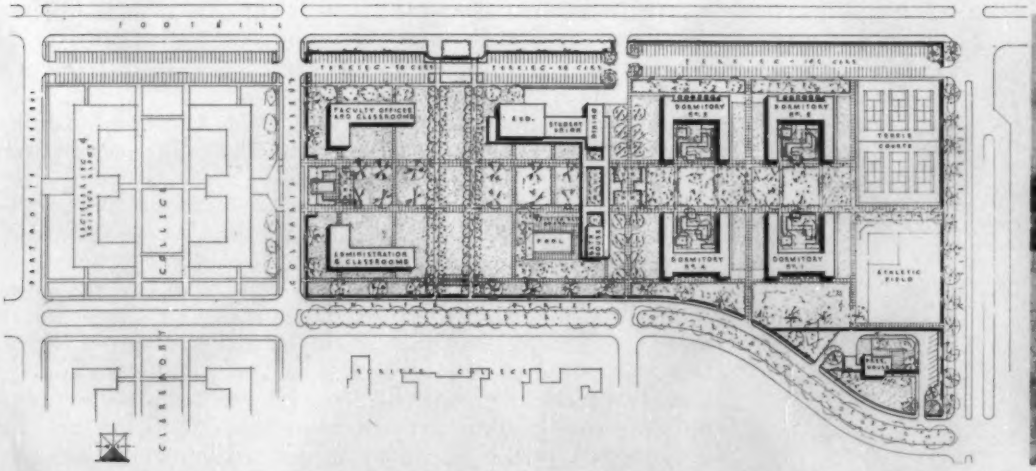
E.K.T.

*With Clifton Fadiman, the Texaco Roving Reporter, on N.B.C.'s broadcast of the Metropolitan opera, February 22, 1958.



Southern California School of Theology: Pereira & Luckman, supervising architects; Criley and McDowell, associated architects

Colleges Master Plan for the Future

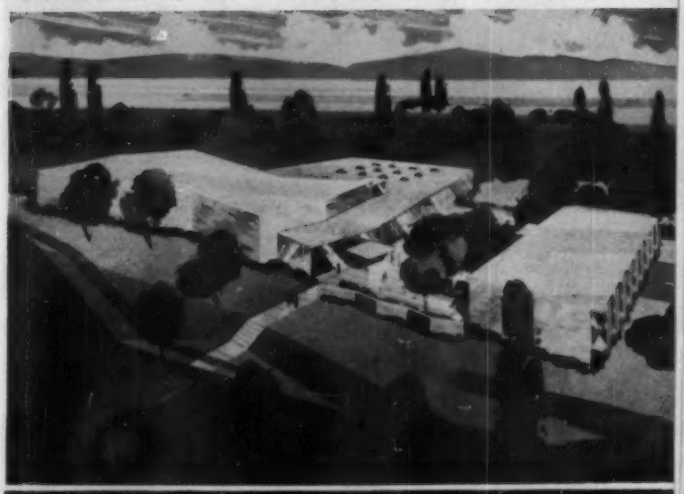




Harvey Mudd College: Heitschmidt and Thompson, architects; Edward D. Stone, consulting architect.

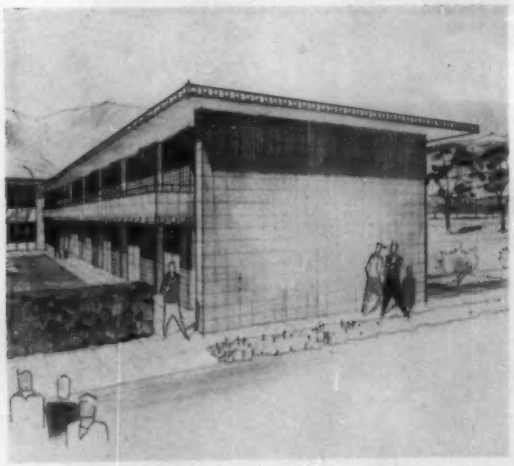
By 1960 the first wave of "war babies" will be ready for college and the already crowded facilities of existing institutions will be further strained. Building programs, under way for some time at the larger universities, will provide for some of this increased enrollment, but not for all of it. To meet the expected need, two solutions show up as a trend: the establishment of completely new colleges, sometimes for very specialized training; and the move from limited plots to new campuses with greater ground area. Indicative of these two trends are the four institutions shown here—two new colleges, both offering specialized curricula; and two new campus plans for existing colleges, one for a vocational program, the other for liberal arts and science curricula.

The Southern California School of Theology, the master plan for which has been accepted by its trustees, will be located in Claremont, Calif. Ultimately to cost $5,000,000, the campus will include worship, academic and fellowship centers, administration and classroom buildings. Harvey Mudd College, also in Claremont, was established in 1955, took in its first students last September. It offers special training in science and engineering. So far a dormitory and the gymnasium have been built. Columbia Basin Vocational College, now under construction, is located in Pasco, Wash., and serves an area which is largely agricultural—with the exception of that near the Hanford works of General Electric and the Atomic Energy Commission. The College of Great Falls, Montana, expects to have construction on its new $3,000,000 campus under way in time for occupancy in the fall of 1960. A liberal arts college for men and women, its facilities will include student and faculty housing, fine arts, science, administration and classroom buildings, student and physical education centers, and chapel.



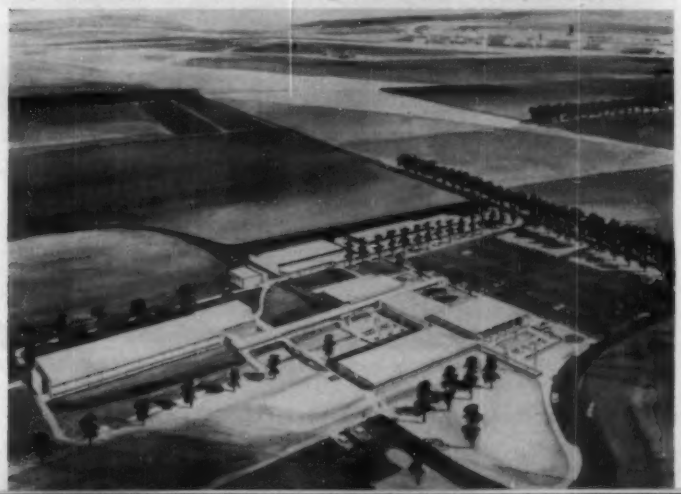


College of Great Falls: Page and Werner, architects.
Top: Fine Arts building; *above:* master plan



Left: master plan; *above:* dormitory for men

Columbia Basin Vocational College: Victor L. Wulff, architect





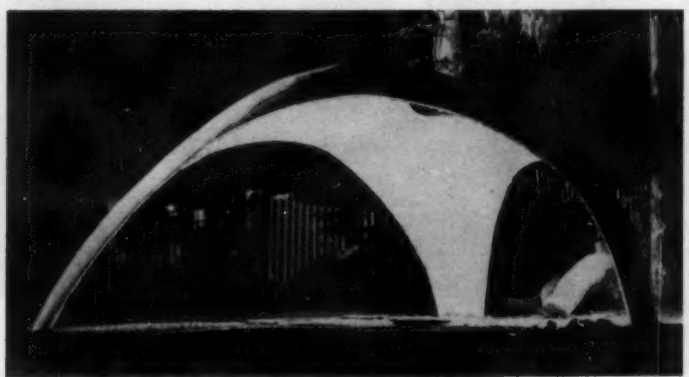


William Hill

Canvas stretched on aluminum frames and supported by aluminum poles forms pavilion for arts festival at University of California, Berkeley

Architecture Students Learn By Building

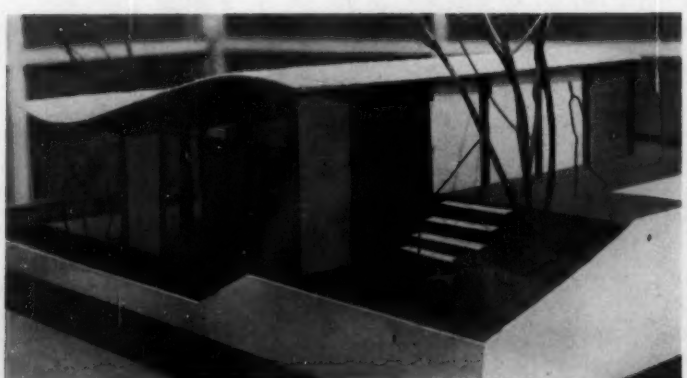
Though its popularity is undimmed, the geodesic dome is no longer the only form through which students at schools of architecture learn by building. Last spring brought forth a number of new projects, notably those at California Polytechnic College's Department of Architectural Engineering and the University of California's College of Architecture. Students at both schools designed and constructed structures for specific uses. For CalPoly students this was an old story: they have built many of the school's much needed "extra" facilities. This year they added a thin shell pavilion and a seminar room, both of which are illustrated here. The canvas and aluminum-framed pavilion at the University of California is the first student-built structure on the campus. (The year before students had experimented with plywood shell roofs on the campus, and five students had built a geodesic bird-cage at Merritt Park in Oakland.) This year's project was student-conceived, student-built and student-managed—the students even got and paid for their own materials in order to have the experience of actual building. The pavilion was used as a shelter for audiences during the annual festival of the arts held during the spring at the College of Architecture.





Bill Woodward

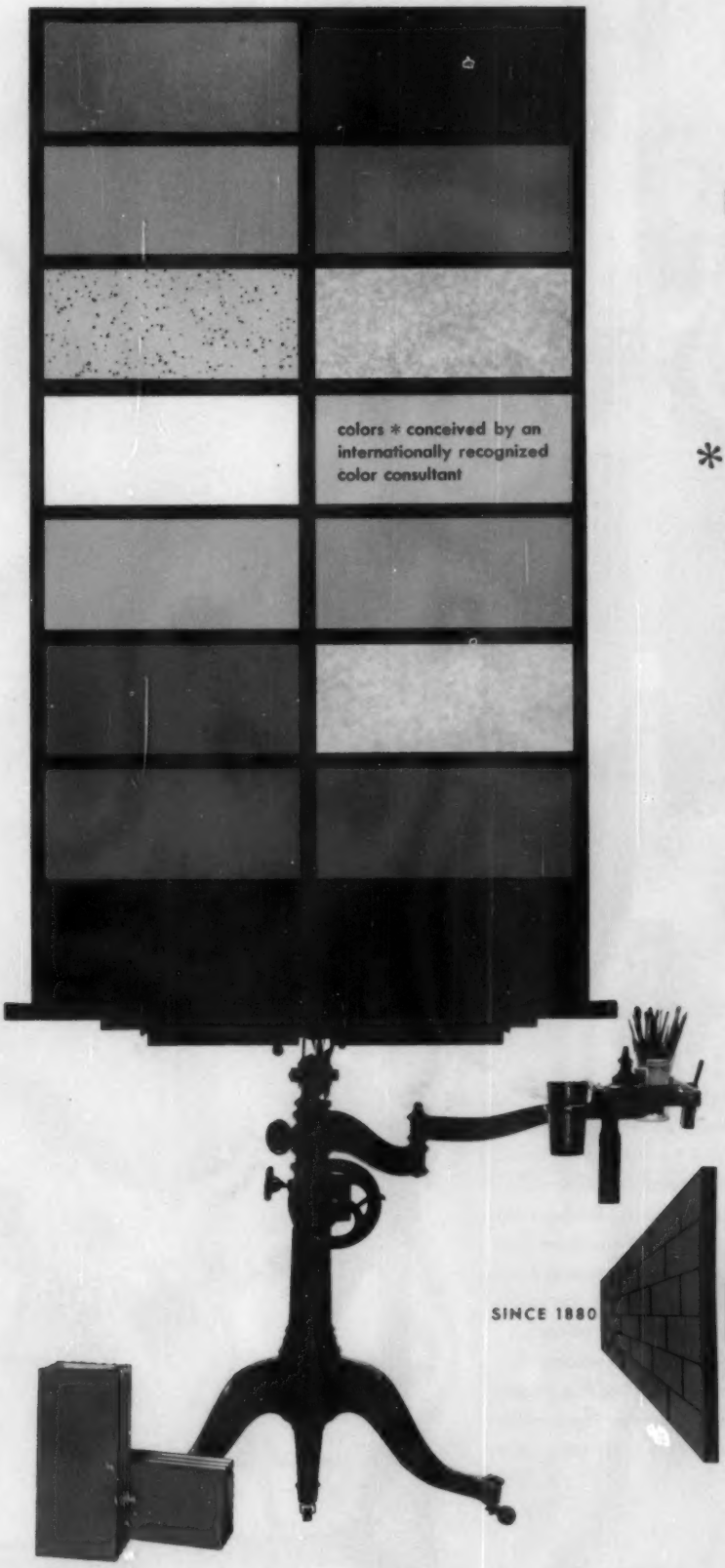
Seniors at CalPoly, San Luis Obispo, designed and built thin shell structure on campus





Bill Woodward

Nailed laminated beams form roof structure for seminar room being added to existing structure at CalPoly



a new color concept in structural glazed tile

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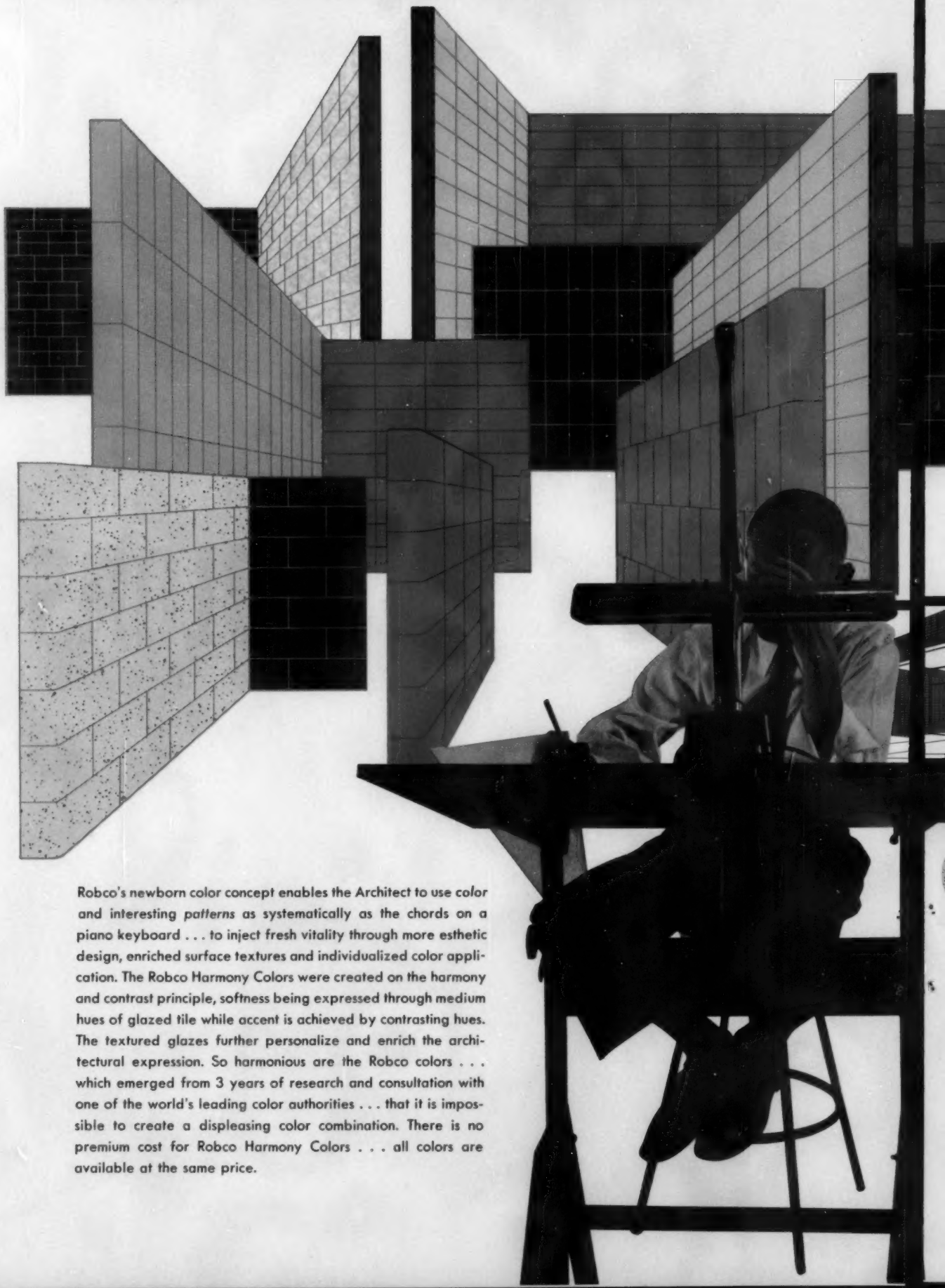
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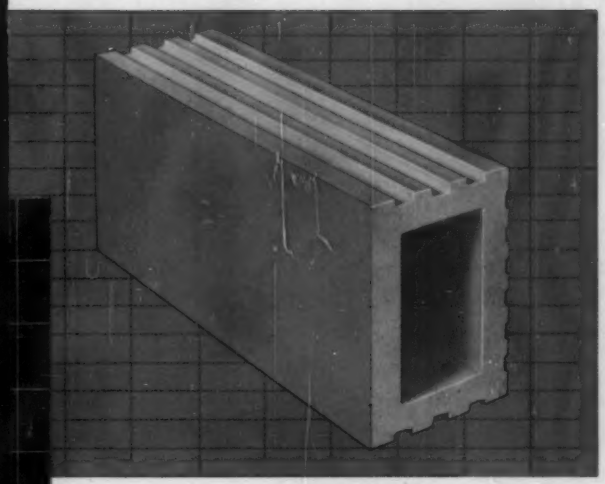
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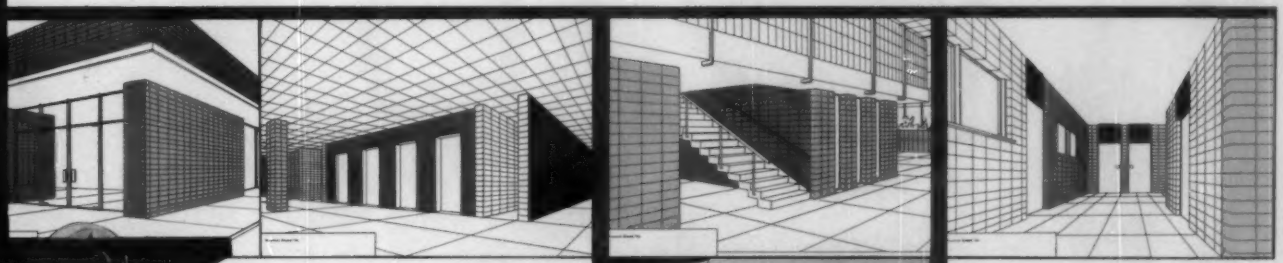


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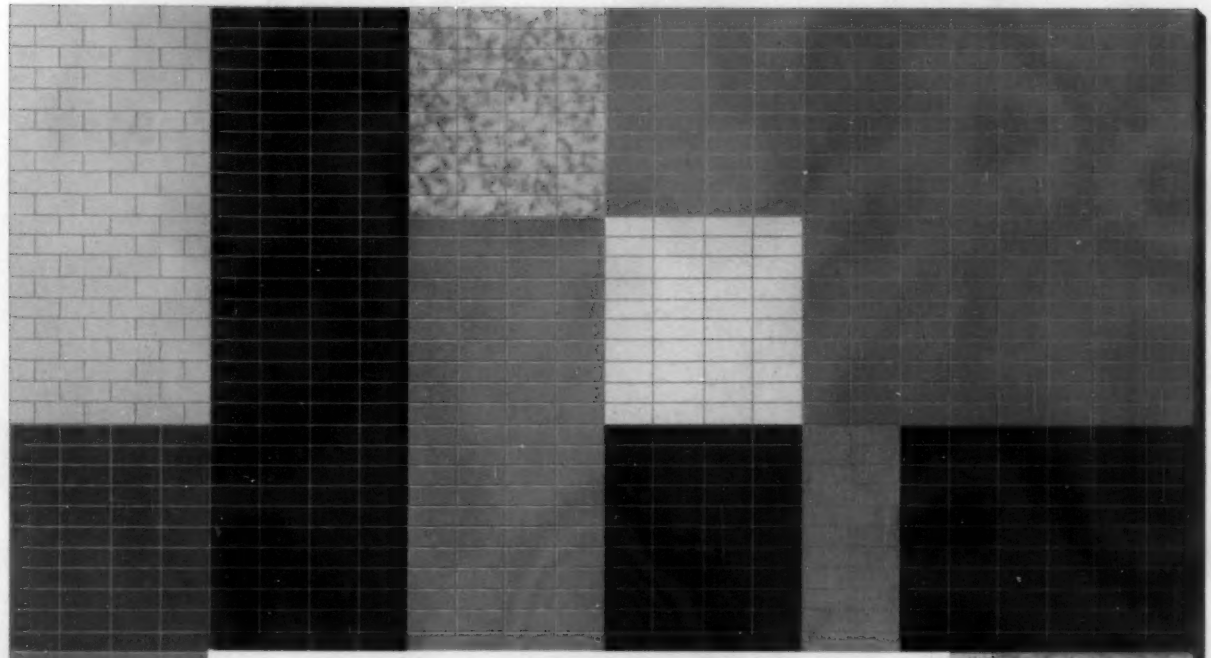
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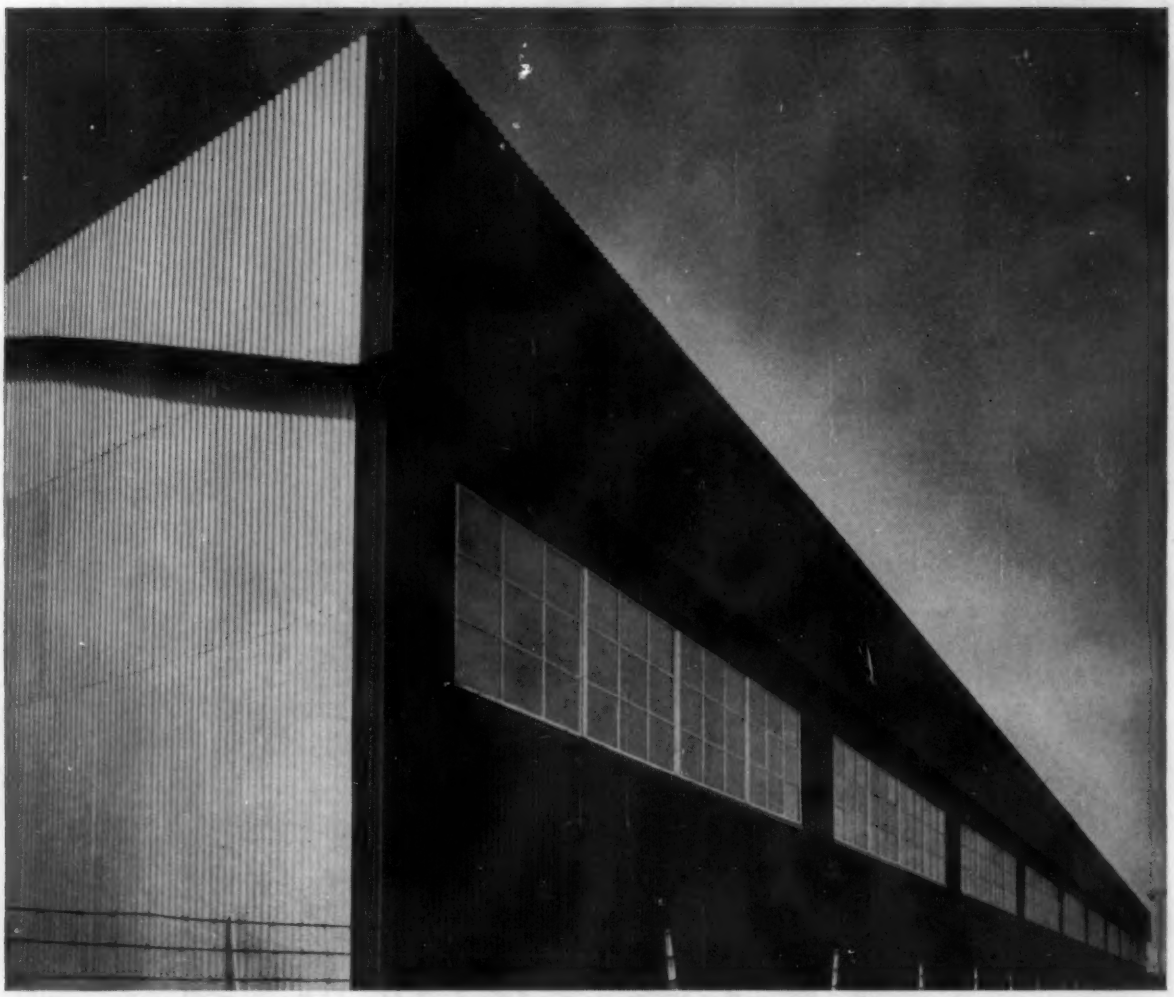


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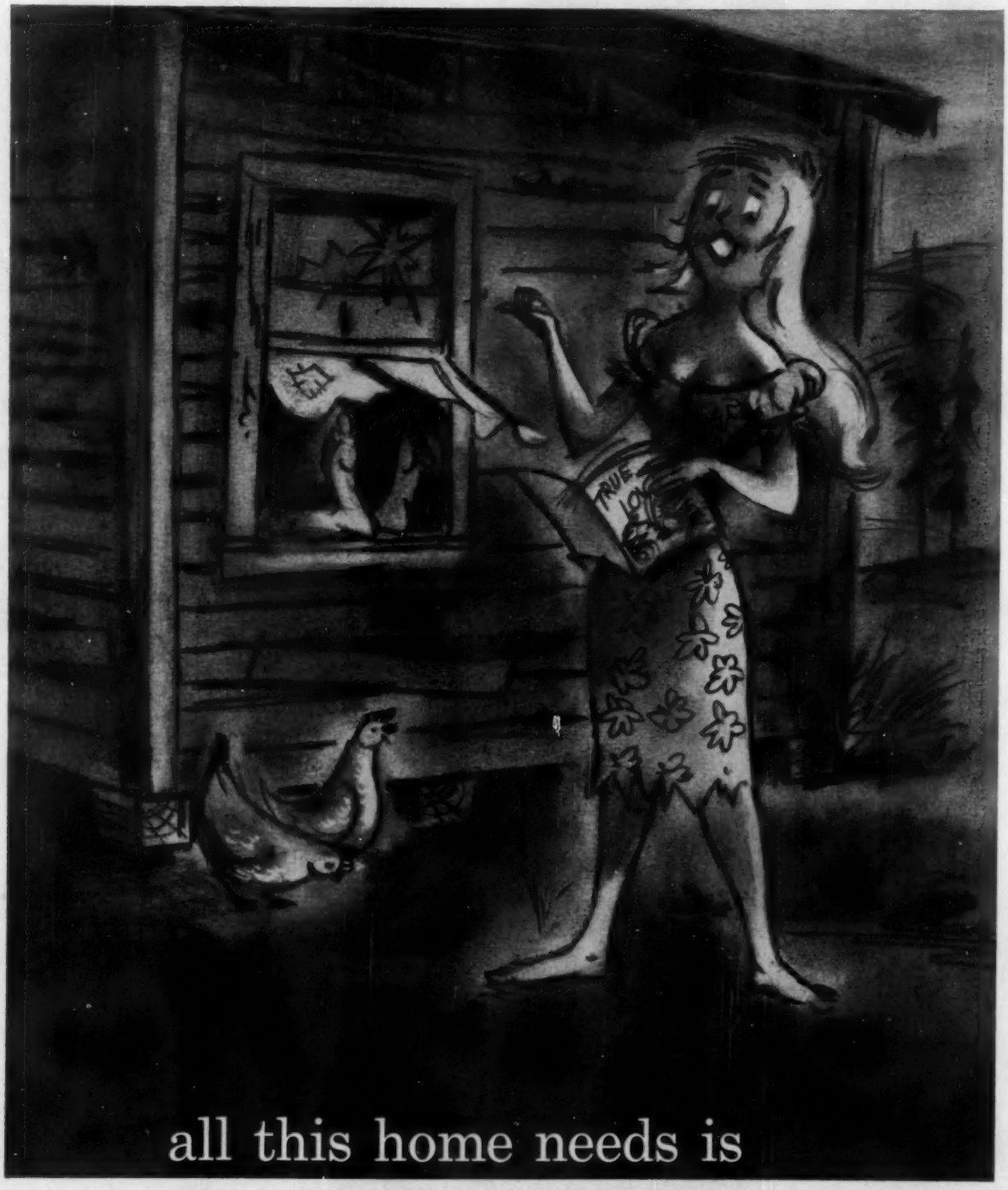
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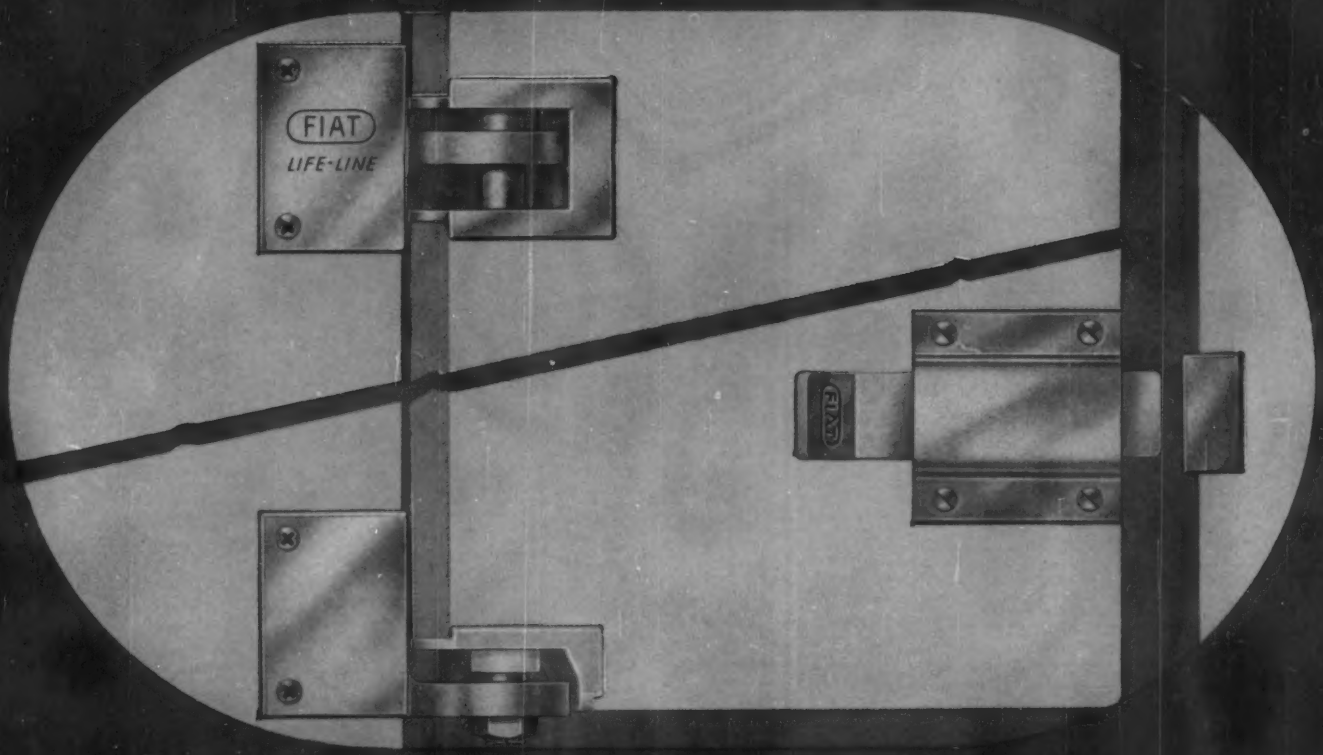
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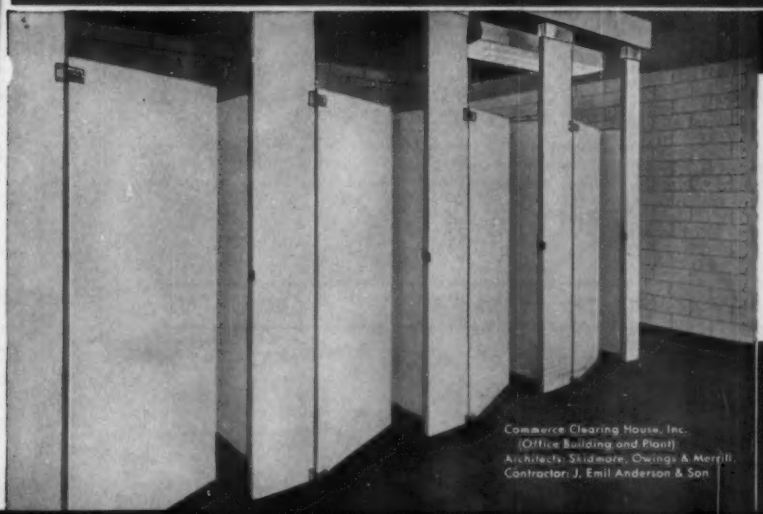
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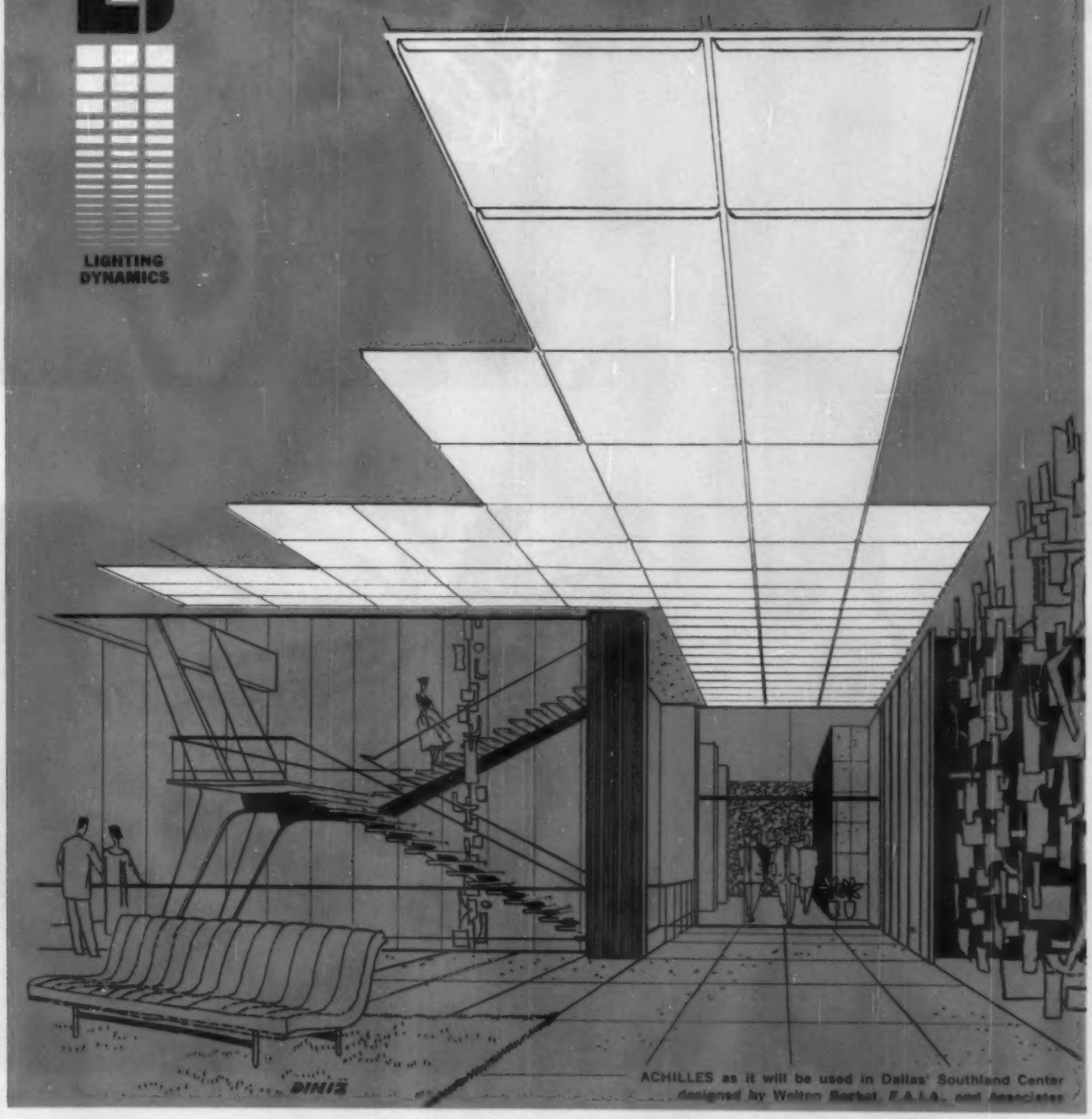
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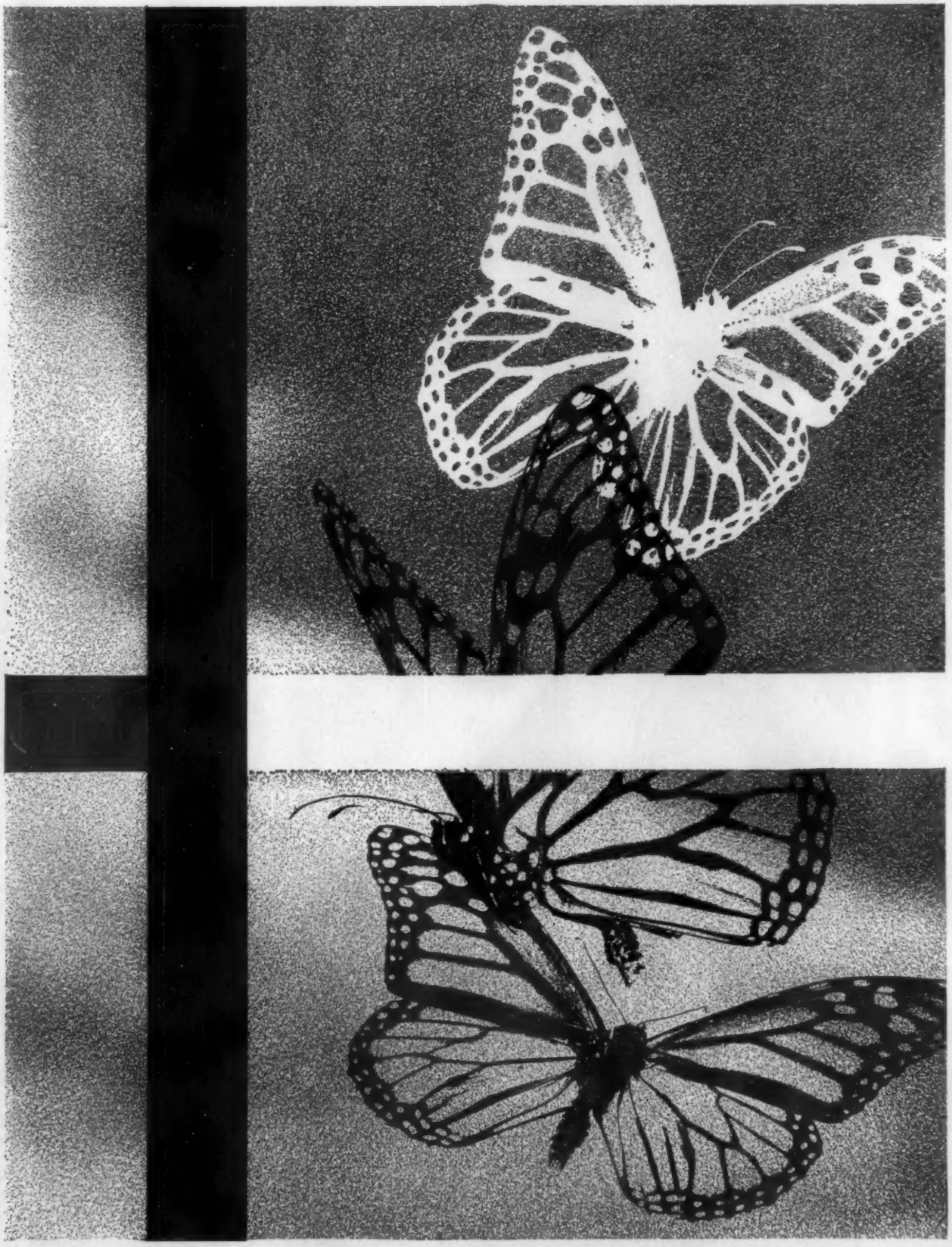
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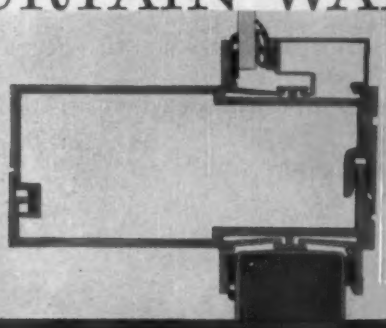
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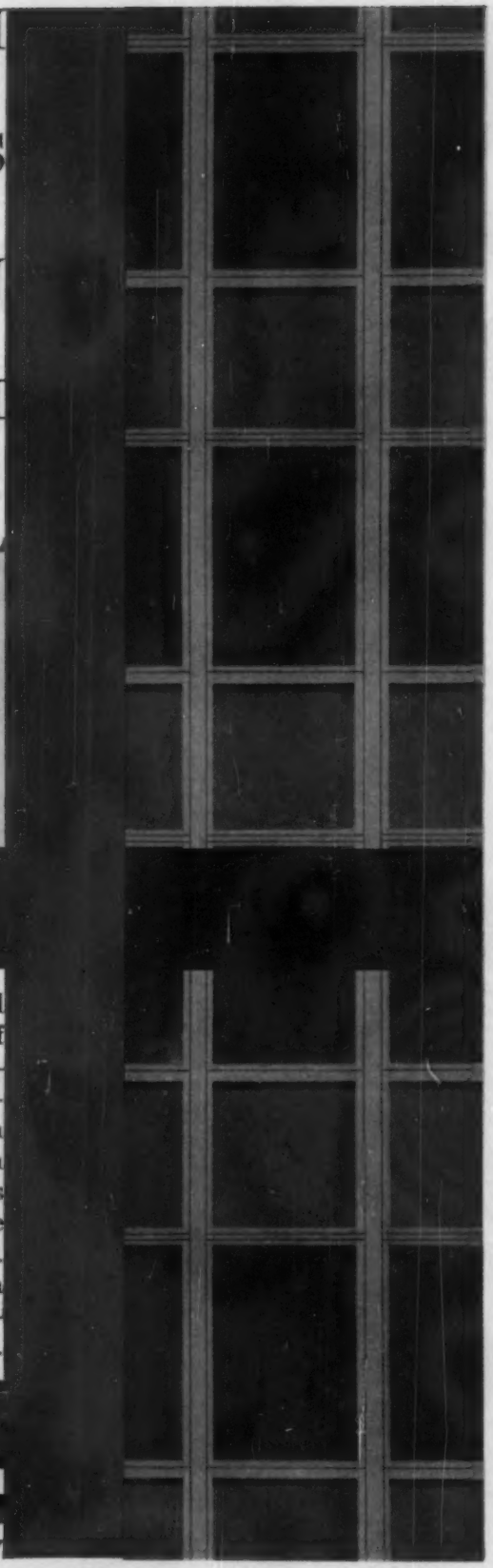
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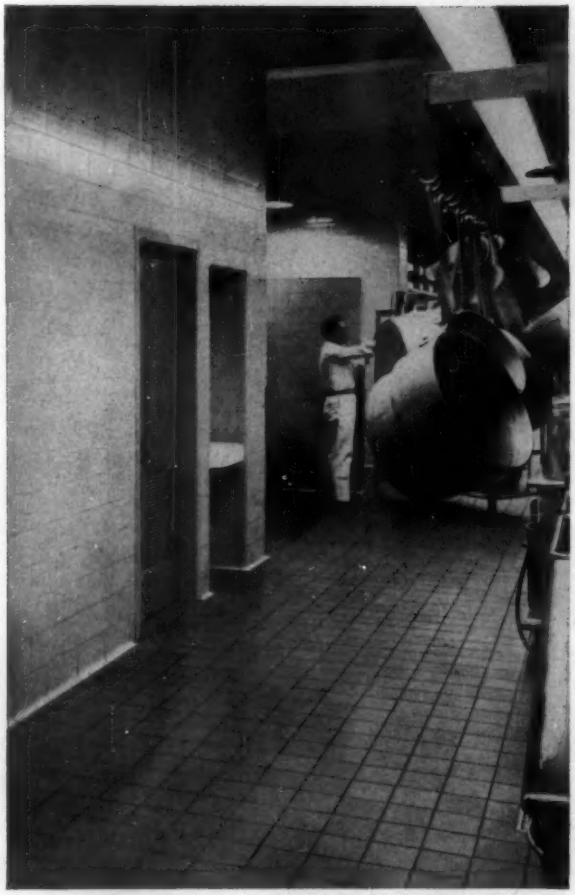
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A is for Architecture

When Frank Lloyd Wright was in Berkeley last year to talk on the Maybeck series of lectures, he repeated his reason for not belonging to the A.I.A.: "If it were the American Institute of *Architecture* instead of Architects, I would gladly be a member."

Well, Mr. Wright, somebody thinks there is an American Institute of Architecture. Recently a letter came from the Idaho Department of Health addressed

"Mrs. Elisabeth Thompson, Editor
American Institute of Architecture
Western Editorial Office
Berkeley, California"

Will you join? Welcome! Any time.

Who talks jargon?

Sometimes conversation between architects and the public is considered to be some kind of gobbledegook—and sometimes it is. And when it is, it's rare that it is received with the perspective and sympathetic understanding that a Tacoma educator gives it. Describing a school conference he had attended, he said, "Of course architects have their own language. But that's all right with me. I talked about 'the whole child'—and they talked about 'module'!"

The Architect and the Atom

Architects are still on the side lines in the nuclear field, as far as having a part in designing the buildings which house the machines which are so quickly becoming household words. To the engineer have gone the jobs—most of them—and there is no architecture for the nuclear field. Talking about this not long ago, California Council president Fred Richards suggested that one simple way in which architects could help nuclear engineers and scientists would be in the "architecture of basic elements—a small tool that fits the hand, clearances around equipment, all the things we struggle with in, for example, houses or schools. But the big thing the architect can contribute is his ability to think about the project in terms of the whole. Maybe at the beginning of a project he doesn't care about or even understand the details—but he doesn't get caught in the detail trap."

"Some day," he continued, "it will be the architect who will imaginatively use the product of the reactor—for heating, for lighting, for power in the moving of people and goods, because these are the problems that he is always faced with and that he generally tries to solve using the best product available for the job, and the most reasonable one."

Should Architects Advertise?

You might think that candymakers had it made with the public (unlike architects). But when the National Confectioners' Association met in San Francisco this summer, it heard a suggestion made that buying candy isn't the easy, natural, unpsychotic thing they—and you and I—had thought. An advertising man told them that he sees the candy-buying public as "moody, fickle and uncommunicative," frought with "fear, frustration and guilt" that its candy-eating might make him fat, toothless and sticky. But the right advertising could emphasize the "good feelings" of "parental esteem, security and love" associated with candy as a symbol of reward—to the exclusion of the "bad feelings." Manipulate the consumer—that's the technique. But, admitted the advertising man, the consumer manipulates you right back.

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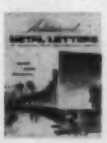
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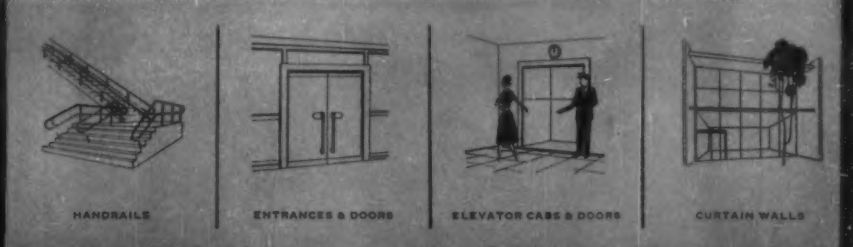


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FALL IS FOR CONVENTIONS

CALIFORNIA-HAWAII-NEVADA: "Creativeness in Architecture," theme of this year's convention of the California Council, A.I.A., will focus the thoughts of California architects on an aspect of architecture which becomes increasingly difficult to consider in the daily round of practice. On the program to discuss "The Creative Mind" are Dr. Donald McKinnon, psychologist and director of the University of California's Institute of Personality Assessment and Research; Jo Sinel, pioneer industrial designer; Charles Eames, designer of furniture, interiors, toys, graphics and films.

Two sessions will deal with "Materials as Creative Tools" and "Structure in Creative Design," with Tacoma architect Robert B. Price, David Countryman, research engineer for Douglas Fir Plywood Association, and Elmer Gunnette, district engineer for A.I.S.C. on the first, and Fred N. Severud of New York as the sole speaker at the second.

Three architects will analyze buildings they have designed, following the development of the design from beginning to completion. They are Victor Lundy of Sarasota, Fla.; Paul Thiry of Seattle; and Walter Netsch of Chicago.

The convention's principal speaker, Harry M. Weese, architect of Chicago, will address the convention at the session on "Creativeness in Architecture: Synthesis."

A special session, aimed toward the interests of young architects, junior associates and students will present three young project designers—Neill Smith of John Carl Warnecke, San Francisco; James Langenheim of Pereira and Luckman, Los Angeles; and Richard Hein of Anshen and Allen, San Francisco—who will discuss major projects with which they have been associated.

The convention will be held October 15 to 19 at Monterey, Calif. Loy Chamberlain is advisory committee chairman for the convention.

WESTERN MOUNTAIN REGION: "Living with the Sun" is the theme of the convention for which architects from Arizona, Colorado, New Mexico, Wyoming and Utah will gather in Denver, September 25-27. The theme session includes talks by Dean Sidney Little of the University of Arizona; Dr. Walter Roberts, director of the High Altitude Observatory; John Yellott, former executive director of the Association for Applied Solar Energy; and Thomas Creighton, editor of *Progressive Architecture*.

Other sessions will discuss "The Spaces Between" with San Francisco architect Vernon DeMars, Denver Planner George Nez, and financier William Zeckendorf as speakers; and "Our Client—the Public" with Robert Denny, A.I.A., public relations counsel.

National A.I.A. president John N. Richards and Dean Ralph Rapson of the University of Minnesota will be luncheon speakers, and Morris Ketchum will be speaker at the annual banquet. T. J. Moore, Jr. is general chairman.

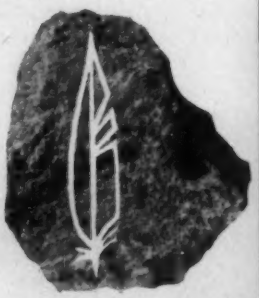
NORTHWEST REGION: Architects of Washington, Oregon, Idaho and Montana will hold a joint conference this year with the Architectural Institute of British Columbia at Harrison Hot Springs, B. C. Keynote speaker will be architect Louis Kahn of Philadelphia. Also listed on the program are Gideon Kramer, Seattle industrial de-



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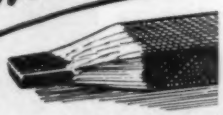
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signer and C. E. Pratt of Thompson, Berwick and Pratt, Vancouver, B. C. Albert O. Bumgardner of Seattle is general chairman for the convention.

Paul Thiry Named Fair Architect

Seattle's "Century 21" Exposition, to be held in 1961, will give the world a chance to see and experience the Northwest's distinguished approach to architecture as well as the fair's exhibits and other attractions. The man responsible for the architectural concept and the individual expressions of it as well as for the site planning is Paul Thiry, F.A.I.A., of Seattle, who has just been named "primary architect" for the fair.

Thiry was unanimously named by the two commissions which govern the fair, the Washington State World Fair Commission and the Civic Center Advisory Commission. Both were involved in the selection of the architect because of the interdependence of the two projects. The fair site and the Civic Center site overlap, and each was made possible because of financial aid from the other. Thiry's name was chosen from 16 suggested by the Washington State Chapter, A.I.A.

Individual buildings will be designed by various architects, presumably from Washington state. Two firms have already been named for conversion work on buildings in the Civic Center area. They are James Chiarelli and B. Marcus Priteca, for the concert hall to be built inside the shell of the civic auditorium; and Bassetti and Morse who will make improvements to the civic ice arena.

Dr. Morley Resigns

For 20 years, Grace McCann Morley was director of the San Francisco Museum of Art in the city's War Memorial building in the civic center, and during that time she made of it a mecca for students of modern art and the only museum in the West completely devoted to the showing of contemporary works in the visual, plastic and architectural arts.

For the museum included architecture within its scope, and for architects the high lights of her career were, perhaps, the shows which she encouraged by the old Telesis group before World War II, and the comprehensive exhibition on "Domestic Architecture of the San Francisco Bay Region" held in 1949.

Last month this leader in Western art—"trail-blazer in art appreciation and education," as the University of California cited her in awarding her an honorary LL.D in June—resigned her directorship. What her plans are have not been announced, but it is a good, clear bet that she has not retired and that she will remain "close to the growing edge of creative activity," fostering this activity and teaching all who would learn.

George Culler, formerly of the Art Institute in Chicago, succeeds Dr. Morley as director.

Oregon Names Architecture Dean

Walter Gordon, Portland architect and lecturer in architecture for the last two years at the University of Oregon, has been named dean of the University's School of Architecture and Applied Arts. He succeeds Sidney W. Little, who resigned last July and is now dean of the new school of architecture at the University of Arizona at Tucson.

Gordon has had his own office in Portland since 1947. Before that he had been with Pietro Belluschi in Portland, and at the Portland Museum of Art as assistant director, and earlier as curator of the San Francisco Museum of Art. Since 1955 he has been a member of the Portland Art Commission. A graduate of Princeton University with both bachelor's and master of fine arts degrees, he also studied at the University of Paris and at Yale University. Early this year he received the first award given by the Portland chapter of Artists Equity for his "outstanding contribution to promotion of cooperation between artists and architects."

OBITUARY

Milton H. Caughey

Milton H. Caughey, Los Angeles architect, died July 15 at his home at the age of 46.

A native of Pennsylvania, and a graduate of both Amherst College and Yale University, he worked with McKim, Mead and White in New York, George Howe in Philadelphia, Alfred Kastner and Anthony Lord; and in California with Marsh, Smith & Powell and Gordon B. Kauffman before opening his own office in 1946. Among the buildings for which he was architect are the Riverside, Calif. Juvenile Hall; Brentwood Youth Center; Pachappa School; Highland High School in Riverside, now under construction, and the Riverside High School, on the boards at the time of his death.

He was an active member of the A.I.A., and had also been president of the Westwood Art Association; president of the West Area Coordinating Council of Los Angeles; fleet captain of the South Coast Corinthian Yacht Club; and was a member of the architectural board of the Episcopal Diocese of Los Angeles.



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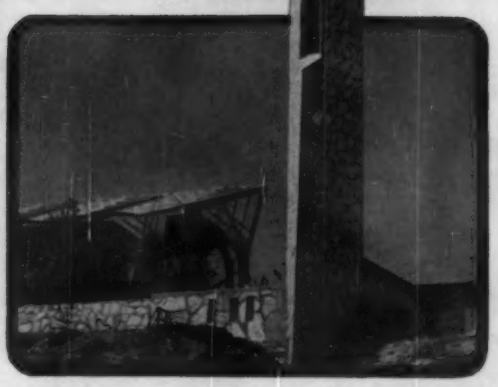


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New Books

Biographical Dictionary of American Architects (Deceased). By Henry F. Withey, A.I.A., and Elsie Rathburn Withey. New Age Publishing Company, 1542 Glendale Boulevard, Los Angeles 26, Calif. 1956. $15.00.

Thumbing through this compilation of the biographies of almost 2000 architects of this country's past gives substance to the intangibility of architecture. Here they are, these architectural progenitors of ours: men from Boston and Bellingham and Weehawken and Grand Forks, North Dakota; men who trained under the great-named New York architects like Cass Gilbert, Town and Davis and Cram, Goodhue and Ferguson and then turned Westward to settle in Helena and Salt Lake and Los Angeles, or South toward New Orleans and Atlanta; men who lived and died 200 years ago, and men who died as late as 1952. Here are the *curricula vitae* of Irving Gill of San Diego; Louis Mullgardt, Willis Polk, Timothy Pflueger of San Francisco; Carl Gould of Seattle; A. E. Doyle, Pietro Belluschi's predecessor, in Portland; and, of course, of hundreds of others.

Until the recently published *American Architects' Directory*, there had never been a compilation of biographical data on the architects of this country. That volume, however, covered only architects living at the time of compilation. This new biographical dictionary fills in the period up to the point where the *Directory* begins, giving the names of architects who lived between 1740 and 1952. The compilers, Henry F. Withey, a Sherman Oaks, Calif. architect and member of the Southern California chapter, A.I.A., and his wife Elsie, labored for a good many years assembling the material for this unique source of information on the architects of the United States. Their pioneering efforts in this work were prodigious, requiring the perusal of countless newspapers, magazines and journals, and correspondence with A.I.A. chapters and with individuals. The scope of the field to be covered—all 48 states—and of the period—212 years—is a good deal larger than most writers ever attempt to cover, on their own, as an initial venture. For the Witheys this was a labor of love, carried on over the years with only what assistance came to them from interested persons.

In so enormous an undertaking a certain number of inaccuracies is perhaps inevitable. Misspellings are unfortunate, of course: in so well-known a name as Stanford White's (his first name is given as Standford), this is perhaps less unfortunate than in that of Albert Pissis (which is given as Pissus), an architect of good repute in the San Francisco Bay Area, but to the rest of the country virtually unknown. Errors of fact are, however, a very different matter, and it is to be regretted that the compilers apparently did not choose to abide by the facts as recorded in so generally trustworthy a source as the Dictionary of American Biography where they have been able to use it as a source.

A number of curious omissions occur such as that of John Reid, Jr., of San Francisco; of Myron Hunt, of Pasadena, who died in 1952, apparently a time within the scope of this volume; and of Ellis F. Lawrence, first dean of the School of Architecture, University of Oregon, who died in 1946.

But another edition, which it is hoped will be forthcoming after the proper interval, will undoubtedly have found out these discrepancies and corrected them. Perhaps also a fuller listing of works by each architect may then be possible. The important thing about this book is that it has been done, and that the task of assembling and giving form to so large a number of biographical sketches will never again be so great.

Calendar of Western Events

• SEPTEMBER 25-27: Seventh annual conference, Western Mountain region, A.I.A., Continental-Denver Hotel, Denver

• SEPTEMBER 25-28: San Francisco Art Festival, Fisherman's Wharf, San Francisco

• OCTOBER 2-4: Annual convention, Structural Engineers Association of California, Ahwahnee Hotel, Yosemite National Park, Calif.

• OCTOBER 9: Departure date, Architects Tour of Japan, Information from Kenneth Nishimoto, 263 South Los Robles Avenue, Pasadena, Calif.

• OCTOBER 9-12: Sixth annual conference, Northwest regional conference, A.I.A., Harrison Hot Springs, B. C.

• OCTOBER 15-17: National Resources Council, Energy Resources Conference, "Energy and Energy Sources, Their Impact on Society", Brown Palace West, Denver

• OCTOBER 15-19: Eleventh annual convention, California Council, A.I.A., "Creativeness in Architecture", Monterey Peninsula, Calif.

• OCTOBER 16-19: Annual convention, California Council of Landscape Architects, El Mirador, Palm Springs, Calif.

• OCTOBER 23-25: Fall meeting National Society of Professional Engineers, St. Francis Hotel, San Francisco

• NOVEMBER 7-9: Annual fall conference, Pacific Arts Association, Northern California Section, Asilomar, Calif.

WESTERN SECTION

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a Architectural File (green)
ic Industrial Construction File (blue)
lc Light Construction File (yellow)

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	Bayer, A. J. Company	64-21
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a	Fiat Metal Mfg. Company	64-13
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Western advertising offices: LOS ANGELES, Bob Wettstein, 672 S. Lafayette Park Pl.; PORTLAND, Bob Wettstein, 921 S. W. Washington St.; SAN FRANCISCO, Bob Wettstein, Howard Bldg., 355 Stockton St.



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BEAUTY and EFFICIENCY

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GRASSOLD-JOHNSON AND ASSOCIATES
MILWAUKEE

GENERAL CONTRACTOR
HUNZINGER CONSTRUCTION CO.
MILWAUKEE

DESIGNER
BROOKS STEVENS AND ASSOCIATES
MILWAUKEE



SQUARE D COMPANY

protects its new Glendale, Wis., plant with ADT *Automatic* services

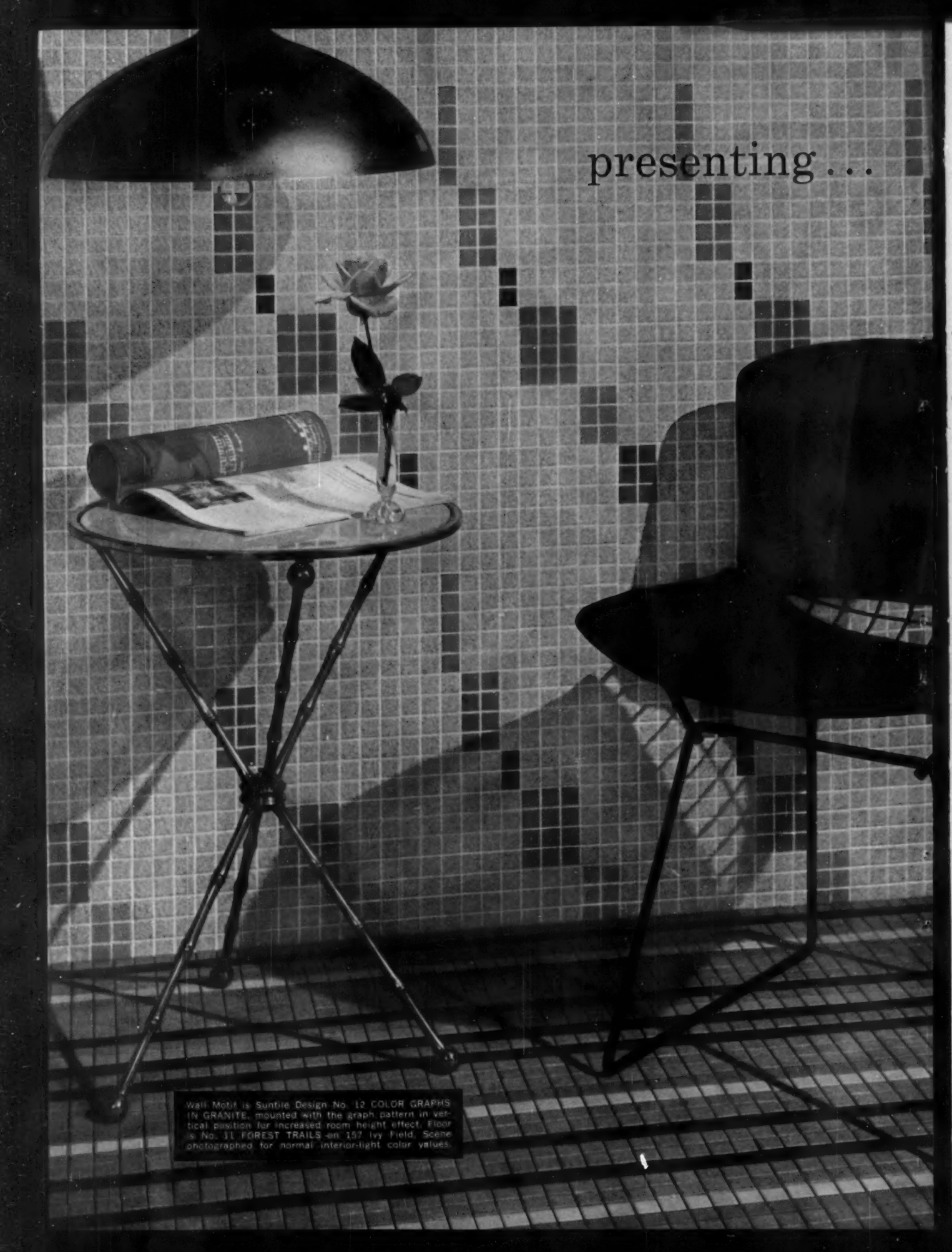
Located on Good Hope Road in the City of Glendale, eight miles from downtown Milwaukee, Square D's fourteenth U. S. plant provides upwards of 200,000 square feet of floor space on a 48-acre site.

Designed for mass production of high-quality motor starters, the Glendale facility is a pleasant workplace and an asset to the community. To safeguard not only the plant, but the lives and jobs of employees as well, ADT Sprinkler Supervisory and Waterflow Alarm Service has been provided to maintain a continuous automatic check on the water supply to sprinklers and to signal the fire department *automatically* when the system operates. During closed periods watchmen signal the ADT Central Station which checks their patrols and speeds help in emergencies.

Whether your project is large or small, there is an ADT Protection Service to meet every requirement. Our local sales representative will be pleased to show you how ADT Automatic Protection Services can be applied to give greater security at lower cost than other protective methods. Call our local sales office if we are listed in your phone book; or write to our Executive Office.

ADT

AMERICAN DISTRICT TELEGRAPH COMPANY
A NATIONWIDE ORGANIZATION
Executive Office: 155 Sixth Avenue, New York 13, N. Y.

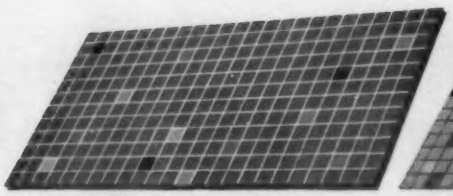

presenting . . .
Wall Motif is Suntile Design No. 12 COLOR GRAPHS IN GRANITE, mounted with the graph pattern in vertical position for increased room height effect. Floor is No. 11 FOREST TRAILS on 157 Ivy Field. Scene photographed for normal interior-light color values.

new designs in *Suntile* ceramics

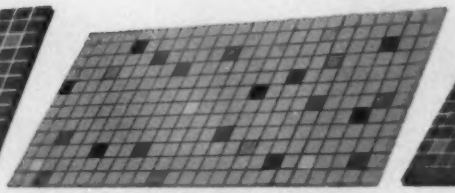
by noted modern artist Max Spivak

Here are new patterns to give your creative talents wider scope in ceramics.

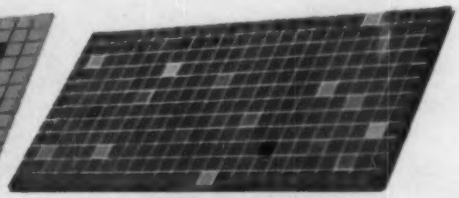
You can originate fresh wall and floor treatments, form subtle decorative harmonies, and use the motifs as insets, stripes, murals, borders, and geometric or random designs.



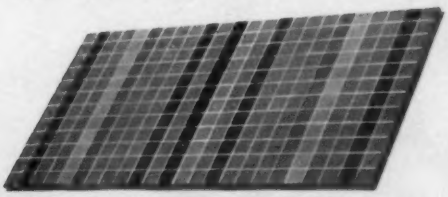
No. 15 DRESDEN BLUE BUCKSHOT



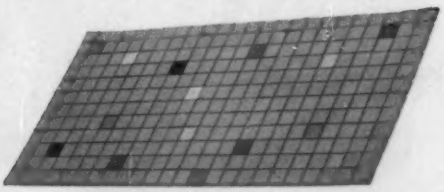
No. 19 CITRUS YELLOW BUCKSHOT



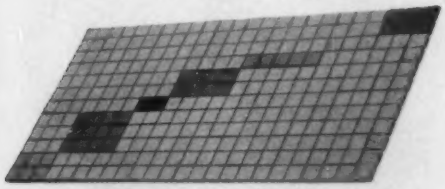
No. 17 TURQUOISE BUCKSHOT



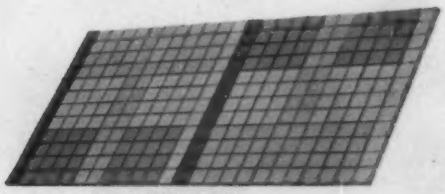
No. 11 FOREST TRAILS on 157 Ivy Field



No. 18 CAMEO PINK BUCKSHOT



No. 12 COLOR GRAPHS IN GRANITE



No. 5 PINK DAWN

Suntile designs are economical, because the 1″ x 1″ tiles are pre-mounted on 1 x 2 foot SETFAST* sheets for fast installation with strongest bond.

Your Suntile Dealer's telephone number may be found in your classified telephone directory. For special assistance with design write Harry J. Macke, Director of Design, at the Cambridge Tile Manufacturing Company.

How SETFAST insures strongest, fastest, most economical installations

*SETFAST is an exclusive development of the Cambridge Tile Manufacturing Company, and, together with the popular Spivak designs, has helped make possible the current renaissance of ceramic tile. SETFAST allows labor-saving application of tile in 1 x 2 foot sheets, and puts a durable, flexible unit between tile-and-tile and tile-and-wall! . . . like the ribs in reinforced concrete!

Both Suntile Wall Tile and Spivak ceramic patterns are manufactured in SETFAST.

*Pats. Pending

Send for color folder of Suntile designs





Cambridge Tile Mfg. Co.
P. O. Box 71, Cincinnati 15, Ohio
Gentlemen:
Please send me color brochure of Suntile designs.

Name_____

Company_____

Address_____

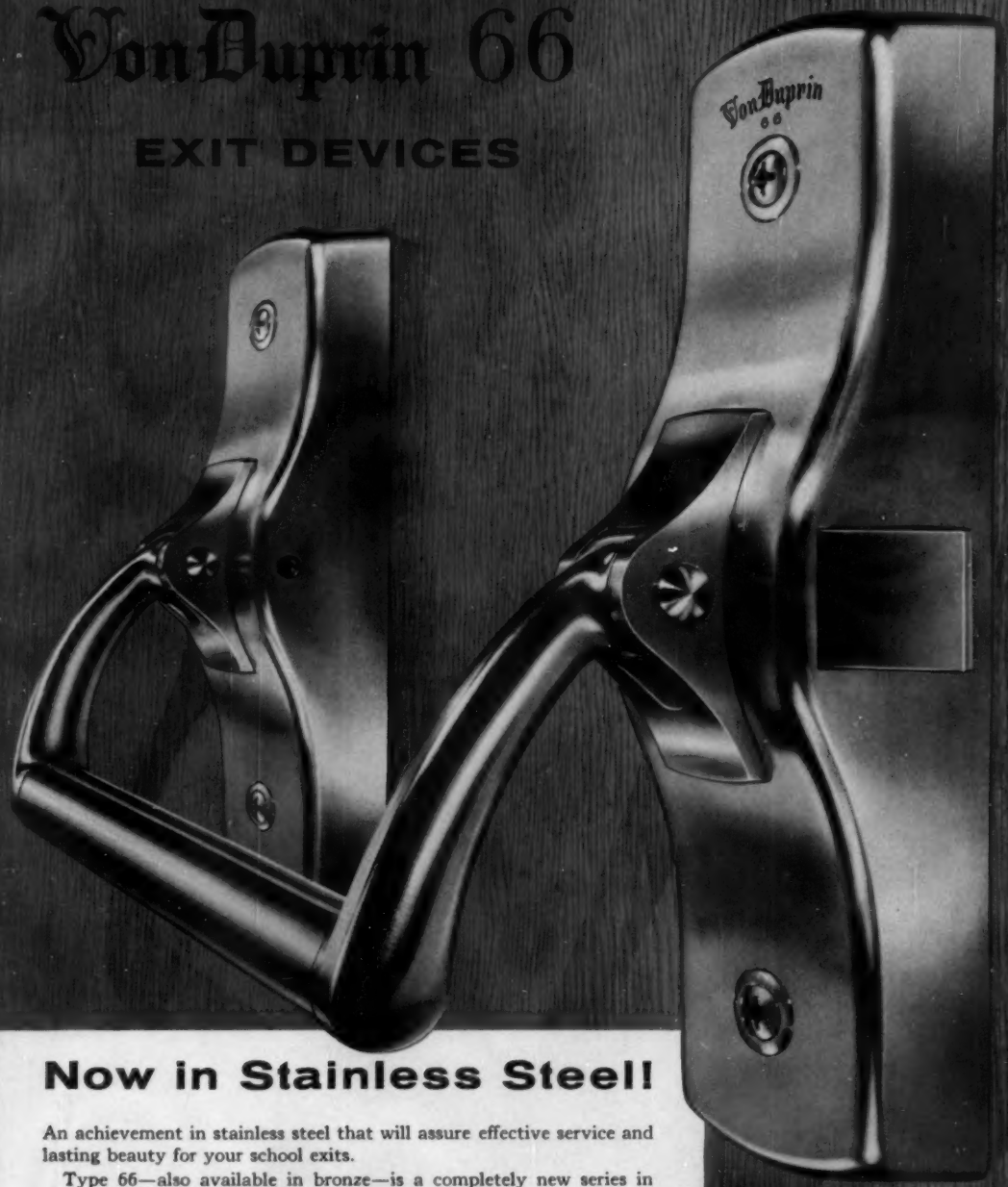
City_____

THE CAMBRIDGE TILE MFG. CO.

P. O. Box 71, Cincinnati 15, Ohio

Von Duprin 66

EXIT DEVICES



Now in Stainless Steel!

An achievement in stainless steel that will assure effective service and lasting beauty for your school exits.

Type 66—also available in bronze—is a completely new series in rim, mortise lock and vertical rod models, and features a smart new line of matching outside trims.

For the finest expression of "the safe way out!", ask your architect or hardware consultant for full details on the Von Duprin 66. Or write direct for your copy of Bulletin 581.

VONNEGUT HARDWARE CO. • VON DUPRIN DIVISION
INDIANAPOLIS 9, INDIANA



To brighten the face of an office building

You'll see more and more instances where precast architectural concrete facings add distinctive beauty – as well as strength and durability – to exterior walls. These concrete "curtain walls" can be quickly anchored in place, thus transforming framework into a finished skyscraper in just a matter of days. The walls shown here are made of Atlas* White cement, with color supplied by exposed quartz aggregates. There's a virtually unlimited range of surface textures and colors available – and concrete surfaces made with cement require little or no maintenance through the years.

Universal Atlas is a major supplier of cement, the modern, versatile building material that meets America's concrete construction needs. Universal Atlas Cement Co., 100 Park Ave., New York 17, N. Y.

Wachovia Bank and Trust Co. Building, Charlotte, N.C.
Architects: Harrison and Abramovitz, New York; A. G. Odell, Jr., and Associates, Charlotte.
Contractor: J. A. Jones Construction Co., Charlotte.
Architectural Concrete Facings: Mabie-Bell Co., Greensboro, North Carolina.

UNIVERSAL ATLAS CEMENTS

Maker of PORTLAND *and special cements* – **Universal Atlas Cement Company**

Subsidiary of **United States Steel**

USS

* TRADE MARK

*FIRST LINE *Extended-Surface* HEAT EXCHANGERS



ASK THE AEROFIN MAN

Specify Aerofin and you specify high efficiency, long service life and low maintenance and service costs.

Take advantage of Aerofin's unequalled experience, production facilities, and materials-testing and design research—of Aerofin's complete engineering service at the plant and in the field.

Ask the Aerofin man.

* Aerofin makes extended heat surface exclusively — not as a by-product, not as a side-line. Sold only by manufacturers of fan-system apparatus. List on request.

AEROFIN CORPORATION

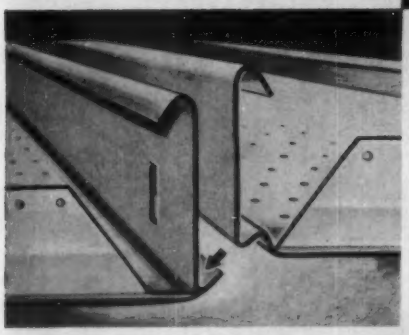
101 Greenway Ave., Syracuse 3, N. Y.

Exclusive self-locking panels keep

Eastern Products Corporation

SILENT CEILING

LEVEL-PERFECT



Panel "locking-lip" guarantees a micro-smooth ceiling unaffected by vibration.

Thanks to Eastern's advanced engineering, no other acoustical system ever offered so many unique advantages to the architect. When you specify "Silent Ceiling," your ceiling problems disappear.

Alignment is no problem! Eastern's all-metal panels lock themselves together perfectly, permanently.

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Installation is no problem! Eastern's longer modules, as long as 12 feet, can be installed with maximum ease and speed. Sound-absorbing pads are fully pre-fitted into the panels.

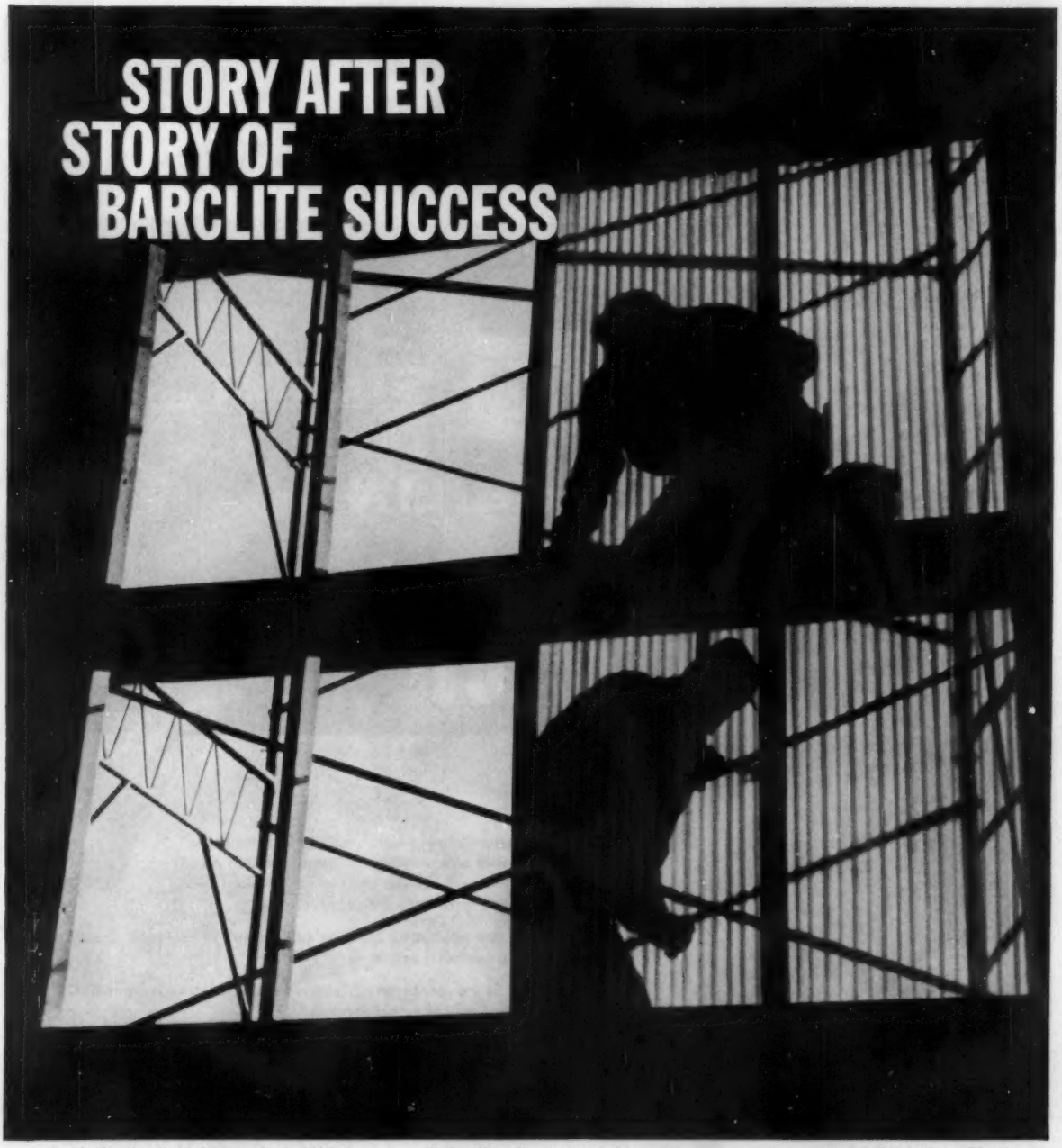
Maintenance is no problem! Eastern's baked-enamel finish won't stain or discolor. Panels stay level-perfect. The entire system rates Class A in flame resistance, high in efficiency.

Write for detailed specifications and prices.

Eastern

Acoustical Division, Eastern Products Corp.,
1601 Wicomico St., Baltimore 30, Maryland.

All-new, all-metal, all-in-one "Silent Ceiling" . . . more sound control for less!



Here's the story behind Jersey Central Lines' success with Barclite. They had a window problem . . . lots of them . . . at their Elizabethport Diesel Shop. The wood-frame windows had deteriorated and were expensive to replace. What's more, with their high heat coefficient, they let in heat with the summer sunlight and radiated cold air in the winter. That's why they replaced every pane with translucent Barclite . . . the shatterproof, reinforced fiberglass panels that diffuse light and heat . . . that add color and beauty. The Chief Engineer, B. J. Minetti, says, "Rain beating against the corrugated surfaces keeps them cleaned off. Old glass panes got so dirty they cut out light. Cleaning was always a problem." That's just one in thousands of successful Barclite installations . . . in homes or industry, for partitions, movable walls, room-dividers, dropped ceilings, so many interesting applications. For specifications refer to Sweet's Architectural Catalog, Sec. 7D, A.I.A., file 26 A-9. Write for free samples and consultations now!

BARCLITE CORPORATION OF AMERICA* Dept. AR-9, Barclay Building, New York 51

*an affiliate of Barclay Manufacturing Co., Inc.

Guaranteed by Good Housekeeping

No other standard fiberglass panel has earned all these seals!

STUDENT UNION BUILDING, OHIO STATE UNIVERSITY. • ARCHITECTS: BELLMAN, GILLETTE & RICHARDS, TOLEDO, OHIO

Timeless Terrazzo, Contemporary Classic

RECREATION ROOM
WITH SHUFFLEBOARD



DURABLE enough to serve for years without end as the floor for a Student Union building . . . adaptable enough to reproduce the colorful pattern of a shuffleboard in a private home! That's timeless Terrazzo, the contemporary classic.

No pattern is too difficult, no task too demanding, for Terrazzo. Initial cost is more than offset by absence of repair or replacement cost. The smooth, jointless surface cleans readily, is easy to walk on and less slippery than a waxed surface.

Specify any design you wish, in virtually any combination of colors — Terrazzo, marble-hard and concrete-durable, is versatile as your imagination. Free AIA Kit upon request to the National Terrazzo and Mosaic Association, 711 Fourteenth St., N.W., Washington 5, D. C. Catalogued in Sweet's.

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

404 SHERATON BUILDING, 711 14TH ST., N. W. WASHINGTON 5, D. C.

CONNOR ENGINEERING CORPORATION

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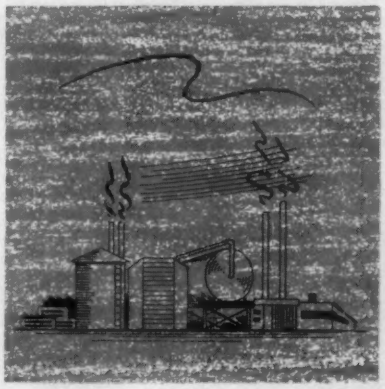
Meets Every Demand for PROPER AIR PURIFICATION

the most complete line of Air Purification equipment available

1—PURIFIES COMBINED RECIRCULATED AND OUTSIDE AIR



2—PURIFIES SEVERELY CONTAMINATED INDUSTRIAL OUTSIDE AIR

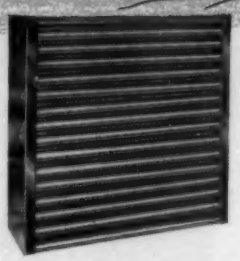


3—PURIFIES COMMERCIALLY CONTAMINATED OUTSIDE AIR (SMOG)



SPECIFICATIONS	No. 28	No. 42	No. 52
Size (Face Dimensions)	24″ x 24″	24″ x 24″	24″ x 24″
Depth (in dir. of Air Flow)	8¾″	8¾″	8¾″
Maximum Capacity	1000 CFM	700 CFM	1000 CFM
Carbon Bed Thickness	½″	¾″	½″
Approx. Weight of Carbon	36 lbs.	45 lbs.	45 lbs.
Resistance*	0.225″ WG	0.285″ WG	0.24″ WG
Efficiency	95%	95%	95%
Net Weight (cell only)	87 lbs.	92 lbs.	97 lbs.
Shipping Weight	110 lbs.	115 lbs.	120 lbs.

*The resistance of Dorex C Cells will not vary provided they are protected against dust accumulation.



THE DOREX NO. 52 CELL . . . NEWEST ADDITION TO THE COMPLETE DOREX LINE.

You can depend on a specially designed Dorex unit to solve your particular air purification problem . . . whether your problem is 1 . . . 2 . . . or 3.

Dorex specialists, with more than a quarter century of experience and research in design and development of air recovery equipment, make the right recommendation . . . whatever the situation.

Dorex air purification units solve your problem. Dorex *Service Engineers* keep it solved . . . keep your system in continuous operation through a time-proven automatic reactiyation-replacement program. Strategically located reactivation stations are maintained throughout the United States and Canada.

With each installation, Dorex assumes responsibility for economical and efficient operation . . . a responsibility lived up to for years for thousands of Dorex users.

For the best in air recovery products, insist on Dorex. Write for recommendations to solve your problem.

CONNOR... for Constant Comfort Conditions



Write for "Air Conservation Engineering"... the authoritative text on air purification.

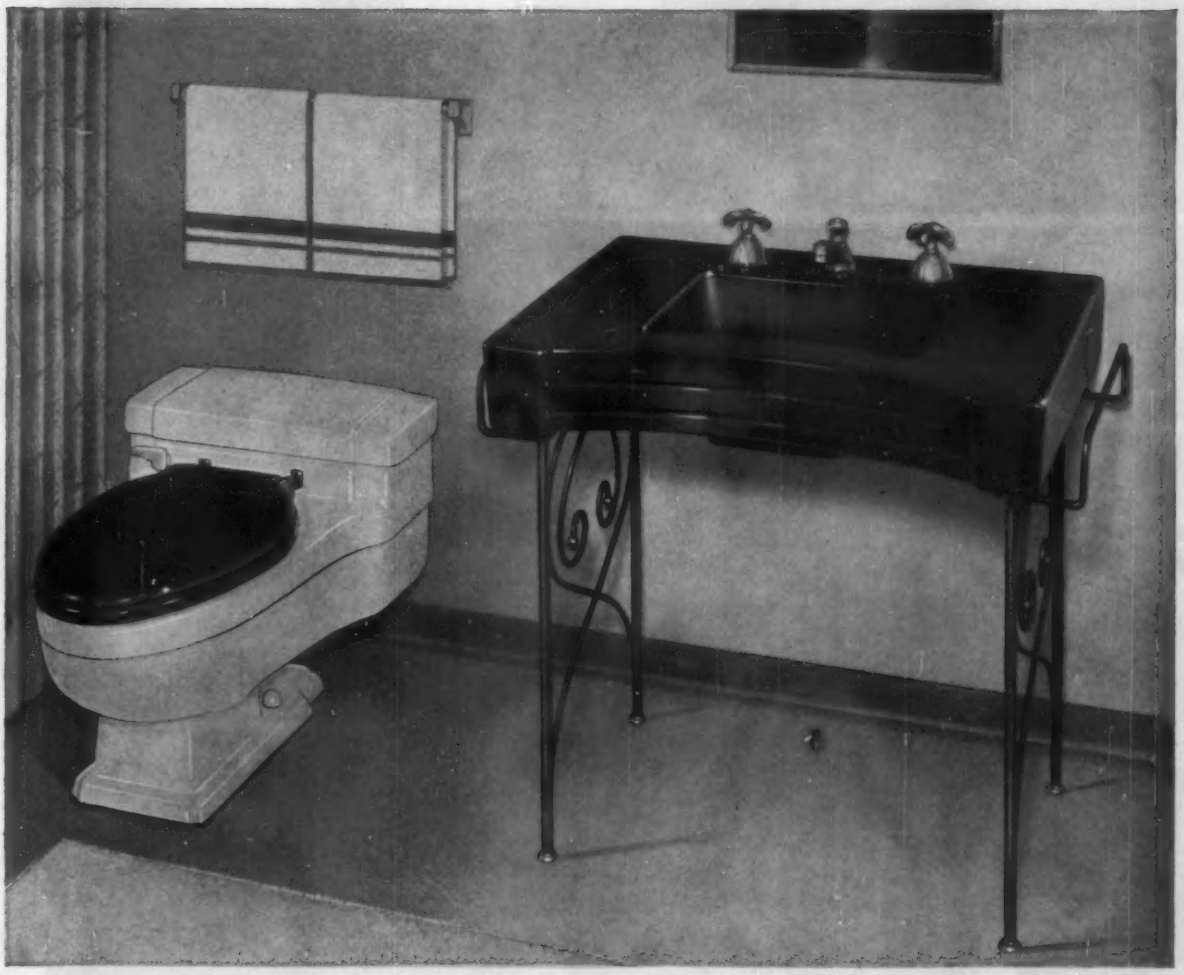
CONNOR ENGINEERING CORPORATION

82 SHELTER ROCK ROAD • DANBURY • CONNECTICUT

CONNOR ENGINEERING CORPORATION dorex® air recovery

Right Combination

FOR SALE AFTER SALE!



PRODUCED IN 48 DECORATOR COLORS PLUS SPARKLING BLACK AND WHITE

Here is the most wanted, therefore most *profitable* bathroom fixture combination you can offer. The industry's first Concave Lavatory* plus the famous Case Non-Overflow One-piece** Water Closet with the whispering flush.

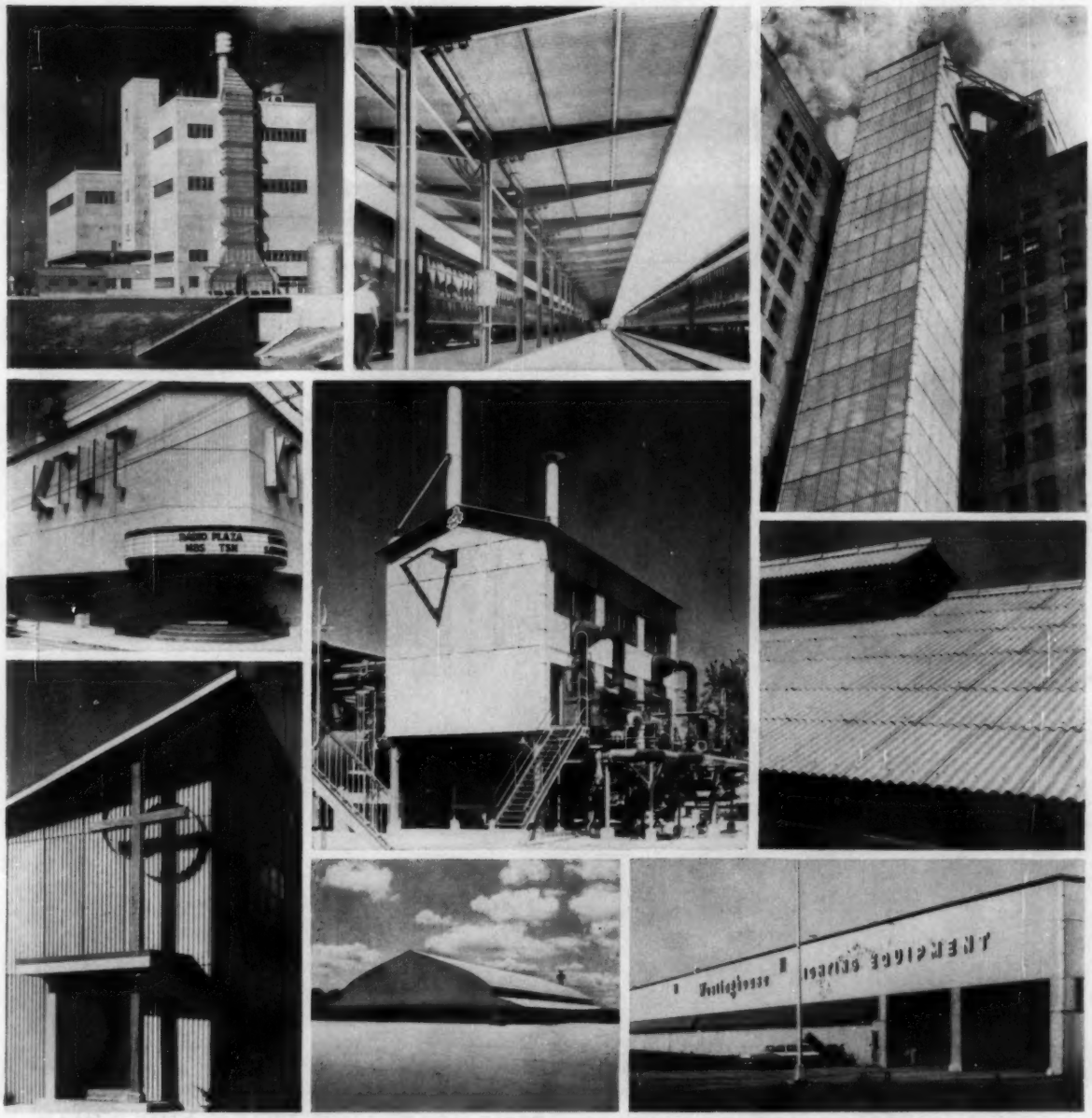
The Case Wellington*** 300 Lavatory is the most wanted because it's the first *really comfortable* lavatory ever made for men and women. Gracefully curved for comfort and unusual beauty. Extra-spacious, wide, flat deck. Shown with art-designed wrought iron legs and towel bars all in one piece. Legs supplied in decorator colors and sparkling black and gold. You already know the Case One-Piece Water Closet and its customer-winning features like non-overflow bowl; safeguarding anti-syphon ballcock; pressurized cleansing rim flush; large water area; healthful seat height; time tested, with streamlined design in 48 colors and black and white. Ask your Case wholesaler or distributor or write:

by Case

*Available with Wrought Iron or Chrome Legs **Patented ***Patent Pending

CASE MANUFACTURING CORPORATION

33 MAIN STREET, BUFFALO 3, NEW YORK



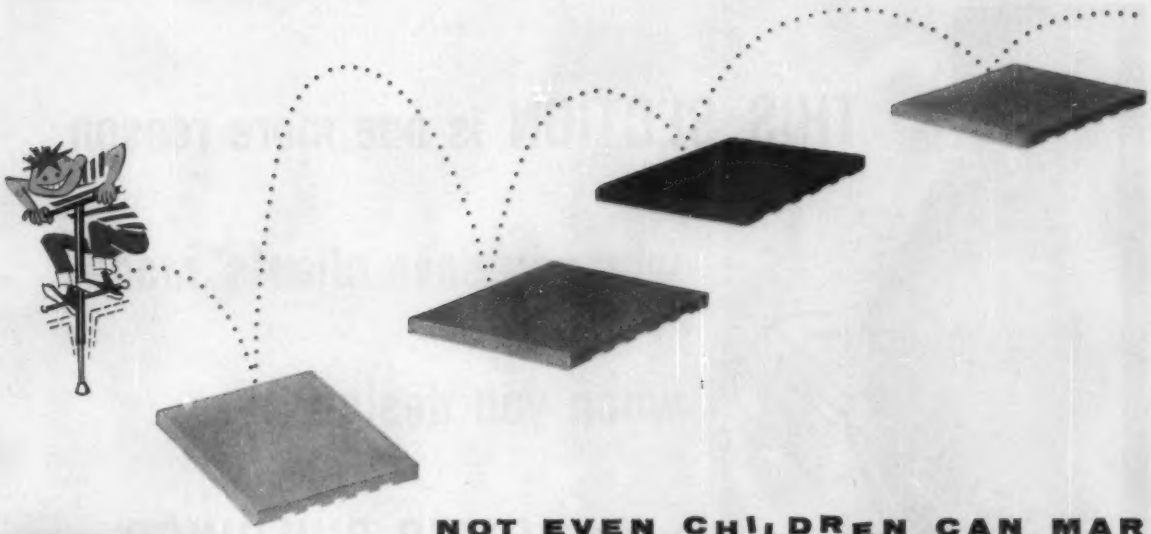
Completely versatile... Corrugated ASBESTONE "400"

Power plants, oil refineries, airplane hangars, factories, railroad stations, cooling towers...Gold Bond Corrugated ASBESTONE "400" even goes on churches. Millions of feet have been used for siding and roofing on all types of industrial and commercial buildings. ASBESTONE "400" resists the harmful effects of weather, salt air, moisture, fumes, rot...and it can't burn! It goes up fast—requires little or no maintenance. Always specify Gold Bond® Corrugated ASBESTONE "400" for the best buildings.

For more detailed information on Corrugated ASBESTONE "400" send for our new Technical Manual, A.I.A. File 12-F. Write Dept. AR-98, National Gypsum Company, Buffalo 2, New York.

Gold Bond
BUILDING PRODUCTS

NATIONAL GYPSUM COMPANY



NOT EVEN CHILDREN CAN MAR THE BEAUTY OF *Summitville Tiles*

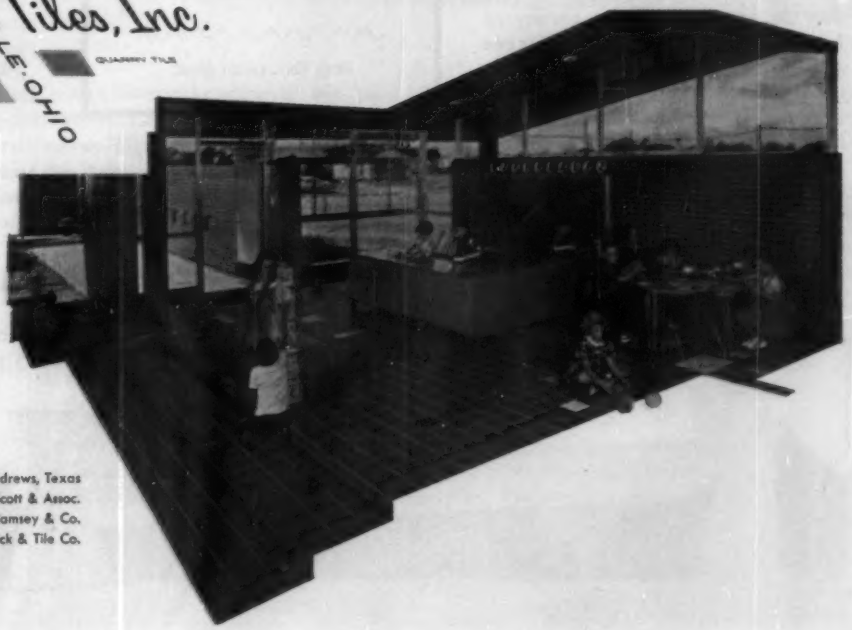
There is no "equal" to floors of Summitville Genuine Ceramic Quarry Tile. They are fire-proof, water-proof, acid-proof and the beautiful natural colors will *never* fade. Floors of Summitville Quarry Tile require neither waxing nor expensive maintenance. Constant abuse by generations of active children will not mar or change the beauty of Summitville Quarry Tile.

If you want the complete story of Summitville's 6 beautiful Quarry Tile; Glazed Frost-proof Quarry Tile in 18 decorator colors; and the sensational 12-veneer large unit Ceramic Tile . . . consult your local ceramic tile contractor or write for catalog, Dept. R.

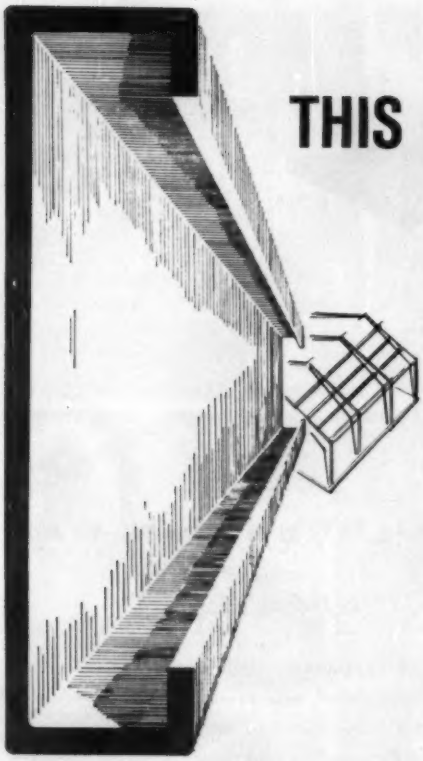
GLAZED QUARRY TILE · FLOOR BRICK · 12 VENEER · QUARRY TILE

Summitville Tiles, Inc.

SUMMITVILLE, OHIO



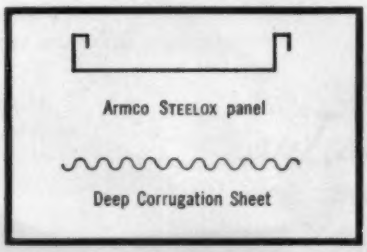
ELEMENTARY SCHOOL: Andrews, Texas
ARCHITECT: Caudill, Rowlett, Scott & Assoc.
GEN. CONT.: Chas. Ramsey & Co.
TILE CONT.: West Texas Brick & Tile Co.



THIS SECTION is one more reason why you save clients' money when you design with ARMCO BUILDINGS

High strength—low weight. That's one of the keys to the economy, convenience and freedom of design with Armco Steel Buildings. Take the C-section purlin of the rigid frame and truss-type Armco Buildings as an example. Through changes in the depth of the section, gage of the steel and spacing of the units, these purlins are able to function under a variety of loading requirements in different geographical areas, in buildings covering a wide range of clear span designs—from 32 to 100 feet. Weight is at a minimum. Just as important, fabrication is economical.

The concept of high strength/weight ratio of Armco Steel Buildings is also demonstrated in the roof covering materials. The sketches show the sections of Armco STEELOX® Panels and Armco Deep Corrugation Sheets. Note how they are designed to provide high strength with light weight. The result is dollar savings when you design with these precision-fabricated buildings.

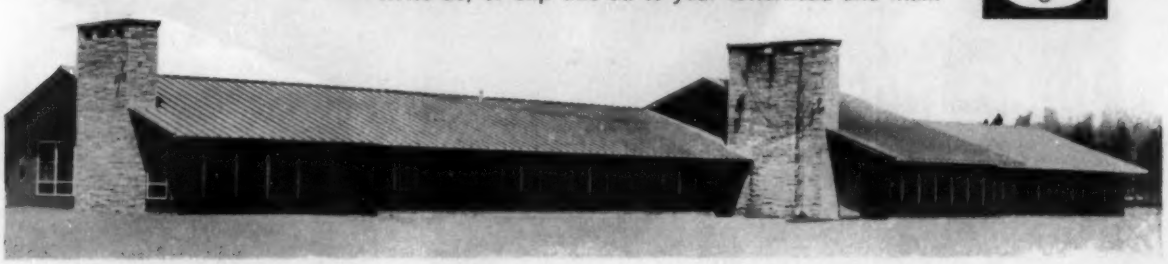


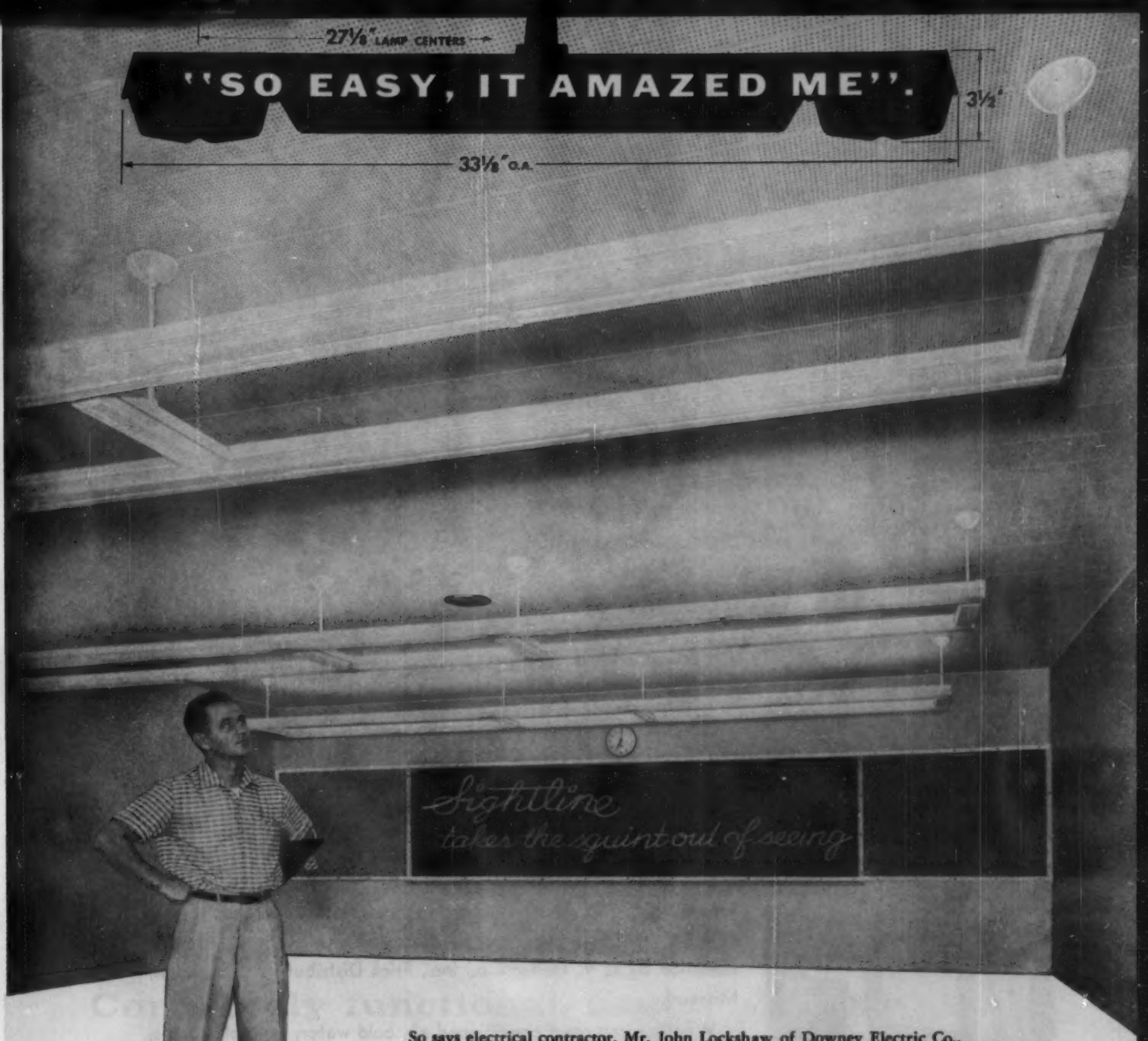
Consider, too, the flexibility of expression you gain through the more than 5,000 standard size units. You can integrate Armco STEELOX construction with plastic, masonry, wood, glass and other materials. Your client will appreciate advantages like noncombustibility, fast erection, simplicity of maintenance.

Write us for a catalog on Armco Buildings. Armco Drainage & Metal Products, Inc., 5898 Curtis St., Middletown, Ohio. Subsidiary of Armco Steel Corporation. In Canada: write Guelph, Ontario. Export: The Armco International Corporation.

ARMCO STEEL BUILDINGS

Send For **New** Free Color Catalog on Armco Steel Buildings.
Write us, or clip this ad to your letterhead and mail.





So says electrical contractor, Mr. John Lockshaw of Downey Electric Co., Downey, California about a recent installation of the Sunbeam SIGHTLINE® system. He further states, "We believe that the following are the reasons why this lighting job went up so fast and neatly: The fixtures are completely assembled, prewired and ready for connecting circuit leads. The hangers just thread into the swivel sockets. It takes but a twist of the wrist to clamp the system to the mounting plates on the ceiling. The spring-loaded bottom swivels and perfectly balanced fixtures eliminate on-the-job leveling problems. Continuous rows are quickly achieved by interlocking units on sturdy support channels. Fine vertical adjustments can be made *after* fixtures are hung by turning finger-controlled "hex" nuts.
It also amazed us to see these Sunbeam SIGHTLINE® units go up with so little need for tools."

Because SIGHTLINE® is a truly integrated, totally indirect lighting system which produces wide spread illumination with absolutely no glare, direct or reflected, it is being specified more and more for interiors where the utmost visual comfort is required.

Sunbeam Lighting Company, 777 East 14th Pl., Los Angeles 21, California & Gary, Indiana



FRICK

Air Conditioning & Refrigeration

Serving the Great BARNES HOSPITAL . . . WASHINGTON UNIV. MEDICAL CENTER at St. Louis, Mo.

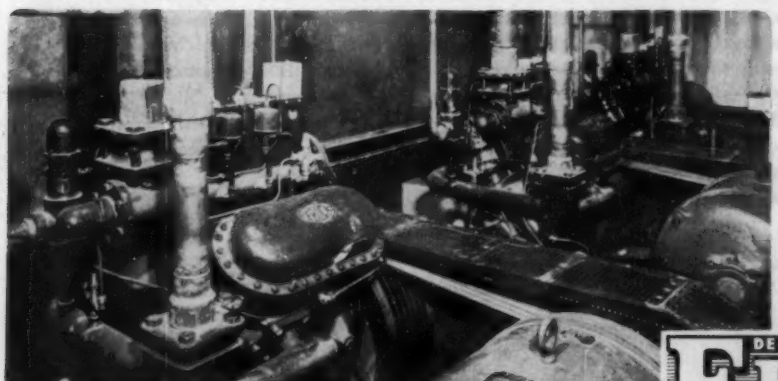


7½-Ton Frick unit air conditioner serving four research and lecture rooms.

Here 11 Frick unit air conditioners and 42 Frick compressors supply the necessary cooling services for operating rooms, private rooms, auditorium and chapel, class rooms, nurse-interns' dormitories, offices, libraries, laboratories, cafeterias, kitchens, special freezers, research departments, morgues, animal rooms, etc. Installation by L. V. Fleiter Co., Inc., Frick Distributors in St. Louis, Missouri.

Whether you need conditioned air, cold water, ice, cold rooms, or very low temperatures,—for human comfort, food service, process work, quick freezing, research, or any other commercial or industrial purpose,—there's a Frick system to meet your exact requirements.

Let us quote now on the equipment you need.



Three Frick "ECLIPSE" compressors which air condition several operating rooms at Barnes Hospital, St. Louis.

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wire . . . phone or visit.

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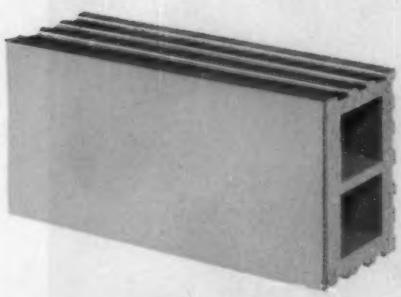
FRICK CO.

WAYNESBORO, PENNA., U. S. A.



The "8W" Series is shown above in modern stretcher stack-bond construction. These units as well as the sizes listed below can also be laid in conventional center bond for attractive interior layouts.

Completely functional, ocular green walls of Natco Ceramic Glaze Vitritile



SIZES AND SHAPES

Series	Shape Catalogs	Tile Face Size	Nominal Thickness
"8W"	8W-257	7⅝" x 15⅝"	2", 4"
"6T"	6T-657	5⅛" x 11⅝"	2", 4", 6", 8"
"4D"	4D-1255	5⅛" x 7⅝"	2", 4", 6", 8"

Now you can combine the ultimate in cleanliness with a range of smooth colorful surfaces that establish the precise brightness ratio most suitable for long hours of demanding visual work.

Natco Vitritile also allows you to achieve significant economies. Simple washing is all that's required for maximum cleanliness and sanitation. In addition, Natco Vitritile provides a sound fireproof structural unit with an attractive interior finish in one operation . . . at one cost.

Natco Ceramic Glaze Vitritile is available in a complete range of functional and decorative colors and in three face sizes to give you the most complete design and aesthetic freedom.

Write for General Catalog S-58 and the Facing Tile Institute Specifications Handbook for information on new dirt-resistant mortars.

NATCO
CORPORATION

GENERAL OFFICES: 327 Fifth Avenue, Pittsburgh 22, Pa.

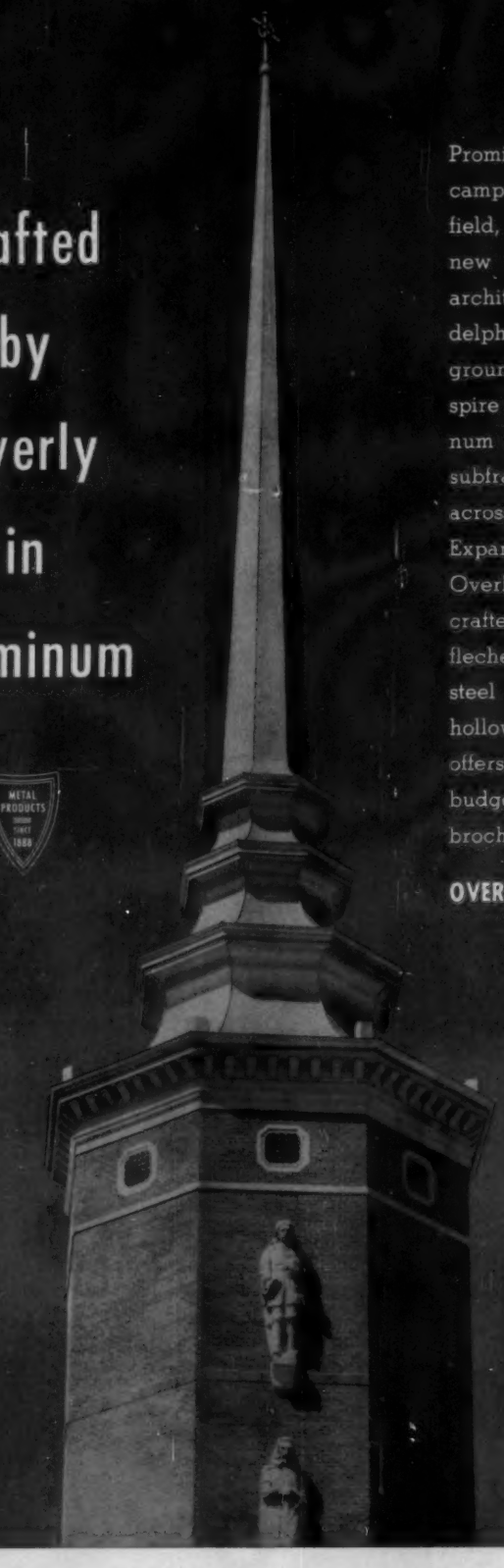
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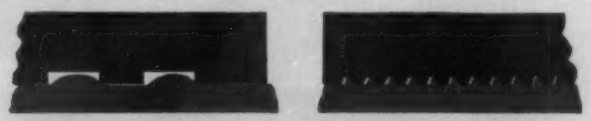
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This Metals Service Center for Copper & Brass Sales, Inc. demonstrates an effective use of new Kaiser Aluminum architectural extrusions in contemporary design.

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Included in the line are a variety of gravel stops, copings, window sills, thresholds, and handrails as well as fascia expanders, fascia system, architectural and structural shapes, rod, bar, pipe and tube. All are now readily available in a wide range of sizes from Kaiser Aluminum distributors.

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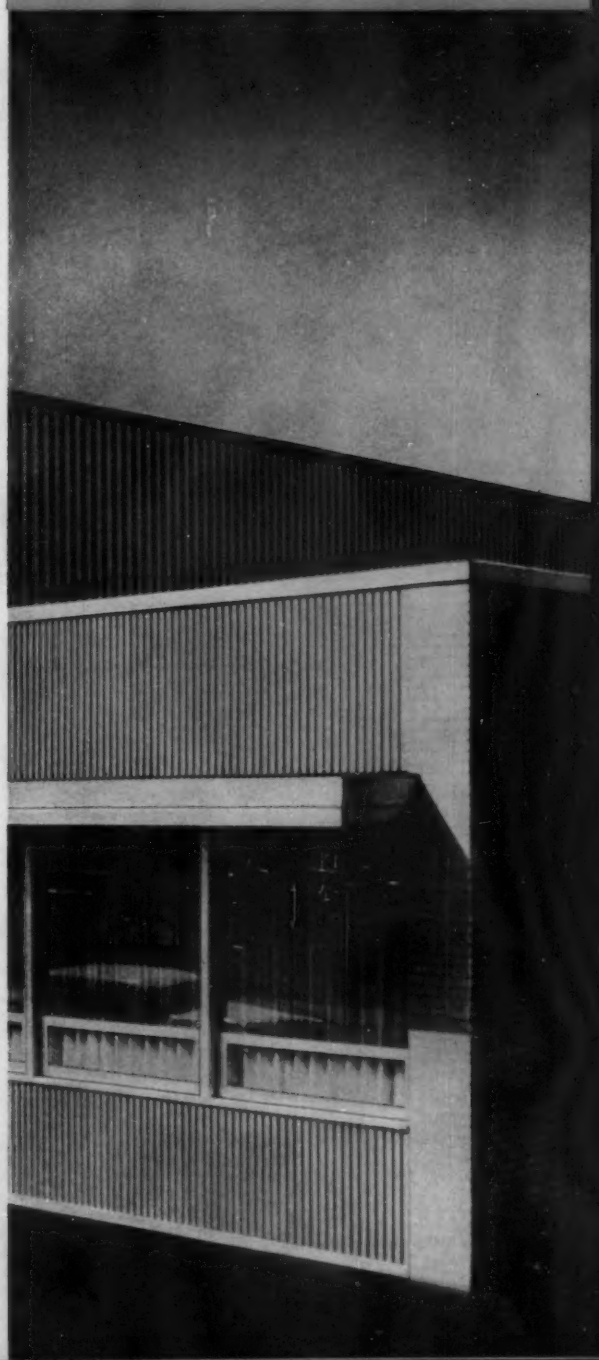
Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office,* Palmolive Bldg., Chicago 11, Ill.; *Executive Office,* Kaiser Bldg., Oakland 12, Calif.



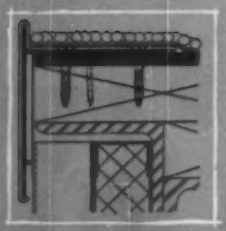
KAISER ALUMINUM

What the architect conceives ... aluminum achieves!

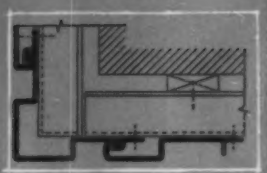
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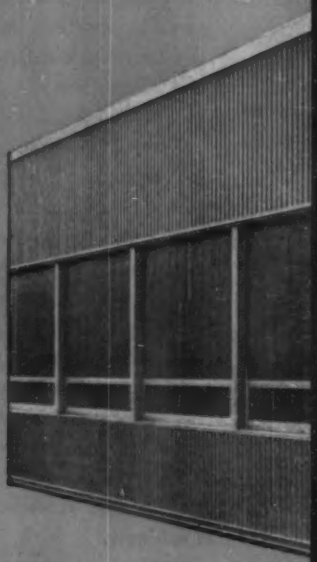




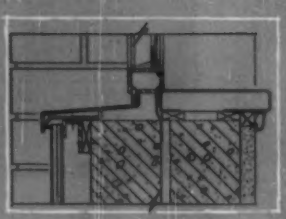
Typical detail and photo of Kaiser Aluminum's Type K-1 Gravel Stop. Note simplicity and pleasing shadow line that results from the straight drip edge feature.



Kaiser Aluminum's standard Facing System may be used for interior or exterior applications. Typical detail shows outside corner components in horizontal section. Photo shows pleasing texture effect of the configuration.



The straight drip edge feature of Kaiser Aluminum's Type K-1 Window Sill is shown in typical detail and photo. As in the Type K-1 Gravel Stop, this feature contributes to the structure's contemporary design. Standard sill widths range from 2½" up to 8¼" plus ¾" drip overhang.

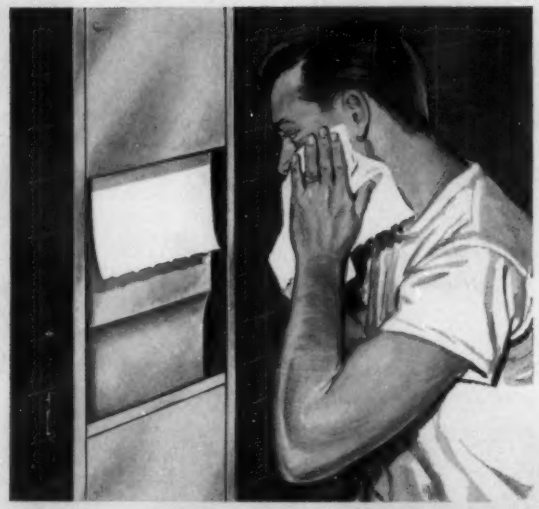


ENGINEERS AND ARCHITECTS: Giffels & Vallet, Inc., L. Rossetti

CURTAIN WALL FABRICATOR-ERECTOR: The R. C. Mahon Co.

GENERAL CONTRACTOR: Perron Construction Co.

Copper & Brass Sales, Inc. (Kaiser Aluminum Distributor), Detroit, Michigan







which do you prefer?

Or, perhaps, we should ask, "Which do you provide for *guests* in your home?"

Your client's employees and customers are *guests*, too. And when they use the washroom facilities you design, they also look for cloth.

Why? The reason is very simple. There is no substitute for the luxury and quality of clean cloth toweling.

You, as an architect, can provide your clients with the best, by including cloth towel service in the washroom facilities you design.

How? By specifying modern recessed cloth units like the one pictured (center, right) . . . or by providing proper wall space for any of a variety of modern, wall-mounted continuous cloth towel cabinets . . . all available to your clients through local Linen Suppliers. *No investment, or installation charge to your client.*

And, you do not obligate your client to any particular service. The recessed cloth unit will accept a variety of cabinets.



For complete information, write to Linen Supply Association on your letterhead. Send for this free Planning-for-Cloth Kit Illustrated, includes specifications for recessed unit and continuous cloth towel cabinets.

A. I. A. File No. 29-J

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Fits easily into architectural planning

Easy to specify. The Iron Fireman MicroMist burner with Scotch boiler can be ordered from one catalog as a single unit, ready for service connections. After figuring requirements (pounds of steam per hour, square feet of radiation, or Btu) refer to simple chart for correct size of unit. Order by model number. Conservative ratings assure ample reserve capacity. From 18 to 96 boiler hp.; up to 650 boiler hp. with rotary burner.

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No high stack. With forced draft firing only a vent is needed. No stack to mar architectural design.

Saves space. Low boiler (5′3″ to 7′2″), rests directly on floor, requires no pit or brick setting.

For your client — low operating costs. Fires any grade of oil through heavy No. 5, with no more supervision than a domestic oil burner. Heavy oils cost less than light oils and are considerably higher in heat value.

MicroMist burner fires any type boiler. Burner alone can be ordered, complete with built-in control panel, fuel and air system, ready to bolt to any boiler front. For natural, induced or forced draft.

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FOR HEATING, POWER, PROCESSING

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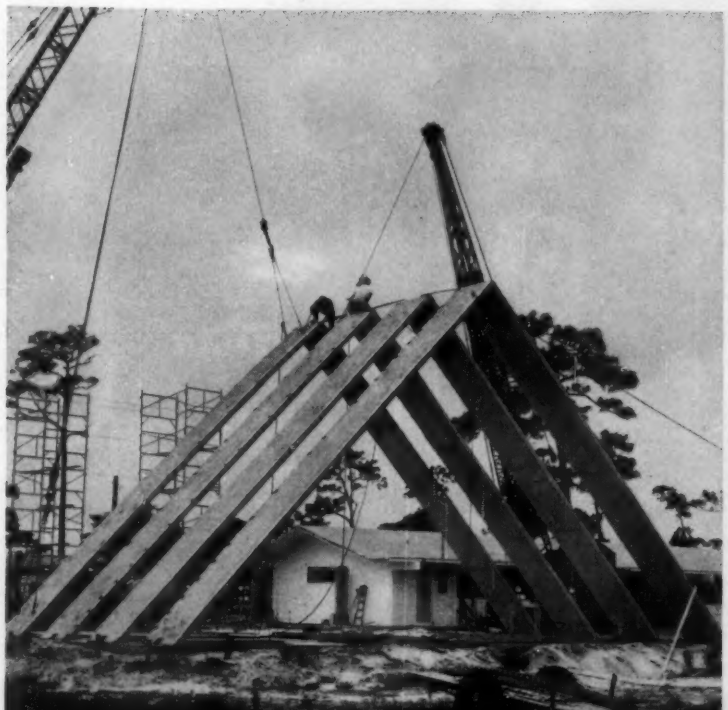
Please send me more information and specifications on the Iron Fireman MicroMist burner.

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Firm_____

Address_____

City_____ Zone____ State_____



Working together, two cranes position prestressed slabs. 20 slabs are 5½" thick, 4' wide and 38½' long; 8 slabs are 4" x 4' x 38½'; there are 10 shorter slabs 4" x 4' x 30'.

NEW CHURCH DESIGN SHOWS VERSATILITY OF **PRECAST, PRESTRESSED CONCRETE**

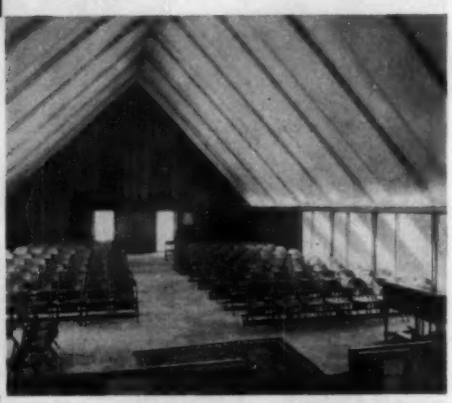
• The St. Ambrose Episcopal Church in West Fort Lauderdale, Fla. is another example of the almost unlimited possibilities of modern precast, prestressed concrete construction.

Just 38 prestressed slabs were required for this unique structure. Cast with plates imbedded at the ends and along the sides, slabs were fitted into slots in the footings, hoisted into place and welded together. The joints were coated with roofing material. That's all there was to it.

By eliminating conventional walls and roof, this technique resulted in substantial savings to the owner. The appearance of the completed job speaks for itself.

The prestressed slabs were made with Lehigh Early Strength Cement at the R. H. Wright & Son, Deerfield plant. Its use helps them save time and money in producing a variety of top quality concrete units.

On the interior, prestressed slabs were sprayed with an acoustical plaster.





Ample daylight flows into the church through the 5 open spaces on each side.

ARCHITECT: Johnson and McAlpine, Ft. Lauderdale, Fla.
ENGINEER: H. J. Ross Associates, Ft. Lauderdale, Fla.
CONTRACTOR: Quick Quality Construction, Inc., Ft. Lauderdale, Fla.
PRECAST, PRESTRESSED CONCRETE UNITS MANUFACTURED BY: R. H. Wright & Son, Ft. Lauderdale, Fla.

- LEHIGH EARLY STRENGTH CEMENT
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New Linen Weave offers you a remarkably realistic linen-like finish with all of the beauty, durability and easy maintenance of B. F. Goodrich Koroseal fabric-backed vinyl wall coverings. Created to cover large wall areas, Linen Weave comes in 20 pastel and accent shades.

Everest is a new Koroseal wall covering with that rich leather-like look in 13 popular institutional colors. A clear vinyl laminate over Everest's grained texture gives it a unique dimensional appearance, as well as greatly improved resistance to scuffing and abrasion. This makes Everest ideal for use in high-traffic areas.

For details and color swatches, write Dept. AR-9, *B.F.Goodrich Industrial Products Company, Marietta, Ohio.*

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WALL COVERING

B.F.Goodrich KOROSEAL SUPPORTED VINYL FABRICS

New! The Andersen Strutwall...

TRADEMARK OF ANDERSEN CORPORATION

a modular component that joins window and wall!

Factory assembly gives tighter, trouble-free fit; saves labor; simplifies and speeds construction!

Here's a great advance in fenestration. A new building component that makes a quality window an integral part of the house frame. Offers tremendous advantages to architects everywhere.

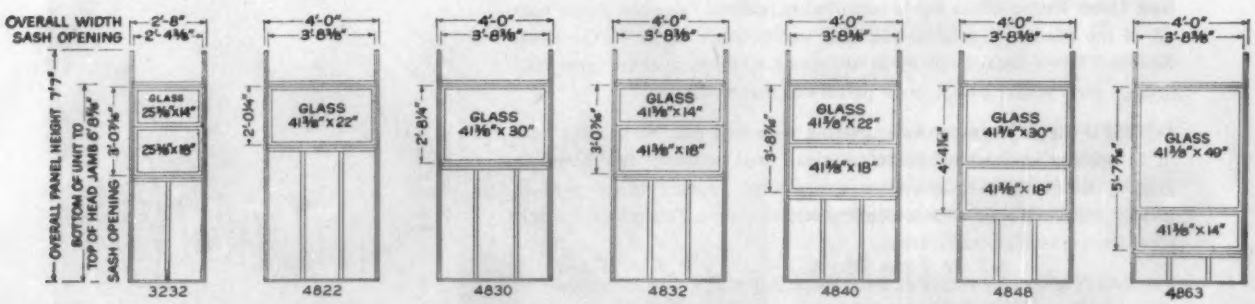
Precision factory assembly of load-bearing side struts, nailers and lower jack studs gives the new Andersen Strutwall unusual resistance to racking. Provides the tightest possible joining of window and wall. Cuts framing and installation two-thirds—from around 22 steps to 7.

To install the new Strutwall, the two load-bearing struts are cut to fit the header construction used. The component is nailed to adjacent studs, tilted up with the wall. Such simplicity practically eliminates the chance of carpentry errors—and callbacks.

There are even bigger advantages in mullions and larger openings. New Strutwalls are simply butted against each other. Because there's structural support at 4-foot intervals, nothing heavier than two 2 x 6 headers are needed in single story construction.

The new Andersen Strutwall fits any type of frame construction—including panel systems. It's been perfected and proved by field tests all over the country.

The Strutwall is sold throughout the United States and Canada. For more information or specification data, write Andersen Corporation, Bayport, Minnesota.



Available in 7 sizes, 2 styles! Andersen makes seven sizes of the new Strutwalls, two sizes of Strutwall door frames. Window components include both famous Beauty-Line* and Flexivent® styles.

*Patent pending.



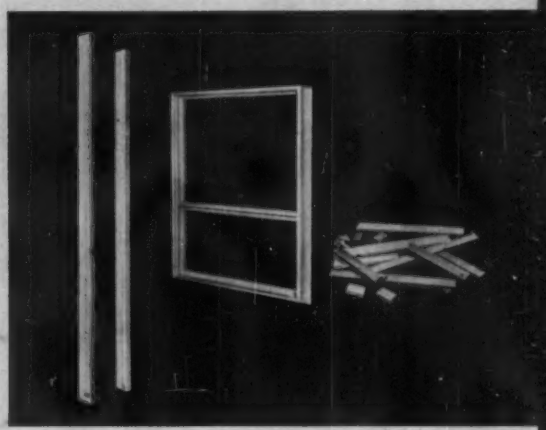
Andersen Windowalls

TRADEMARK OF ANDERSEN CORPORATION

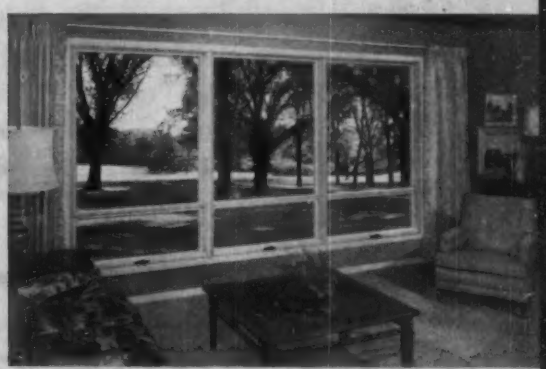
ANDERSEN CORPORATION • BAYPORT, MINN. AW



Simple, error-proof construction! Just cut two load-bearing struts to fit header construction. Nail Strutwall to adjacent studs, tilt up with the wall. This cuts installation steps two-thirds. Practically eliminates chance of carpentry errors and callbacks.



Saves materials, costs less installed! New Andersen Strutwall eliminates the two long cripples on the left, requires two 2x6's instead of heavier headers in multiple openings. Builders report a good saving in total installed costs—even when figured against inferior conventional windows.

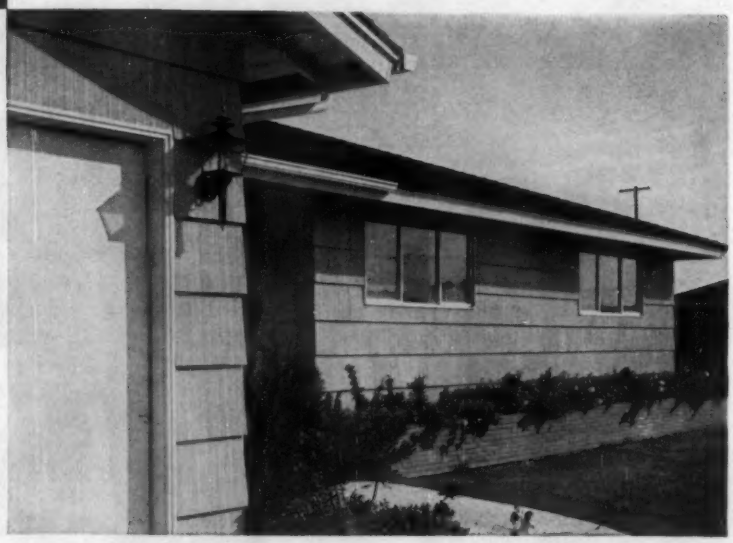


Fits tighter, looks better! Because all parts of the Strutwall are nailed and glued at the factory, you get unusual resistance to racking —the tightest possible joining of window and wall. Famous Beauty-Line and Flexivent styles add beauty and sales appeal to your homes.

CEDAR SHAKE WALLS



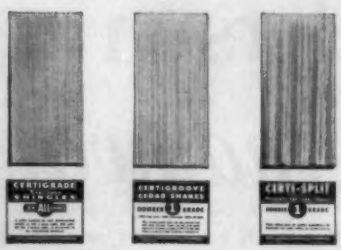
an ageless integrity...



...in the clean, crisp idiom of today

The modern cedar shake is a shingle that has been squared and striated to fulfill the need for *line and texture* in exterior home design. Cedar shake walls, with their clean-cut striations and dramatic shadow accents, enhance any area where a natural material is desirable. That is why *genuine red cedar shakes* have become the dominant wall material in so many of the better communities.

RED CEDAR
SHINGLE BUREAU
5510 White Building, Seattle 1, Washington
550 Burrard Street, Vancouver 1, B. C.





Lobby of the Craddock Clinic, Sylacauga, Alabama. Lawrence S. Whitten, Architect. Swindall Tile Company, Tile Contractor. Tile Description: 60 Persimmon, 97 Gardenia. Color Plate 387.

No extra charge for color and originality



Dramatic design isn't expensive. This striking tile "mural" in the Craddock Clinic was created almost entirely with labor-saving, large-size 8½ x 4¼ tiles.

Note also the contrasting wall colors used to brighten the nurses' station—an indication that the days of dull, drab hospitals are over. Budget-conscious institutions will find in large-size tile a practical new approach to decorating problems, and a wise investment so far as future maintenance costs are concerned.

Write for these helpful booklets:

Booklet 910—Large Size Tile
Booklet 208—Catalog of Tile Products
Booklet GC-1—Color Charts of Glazed Tile

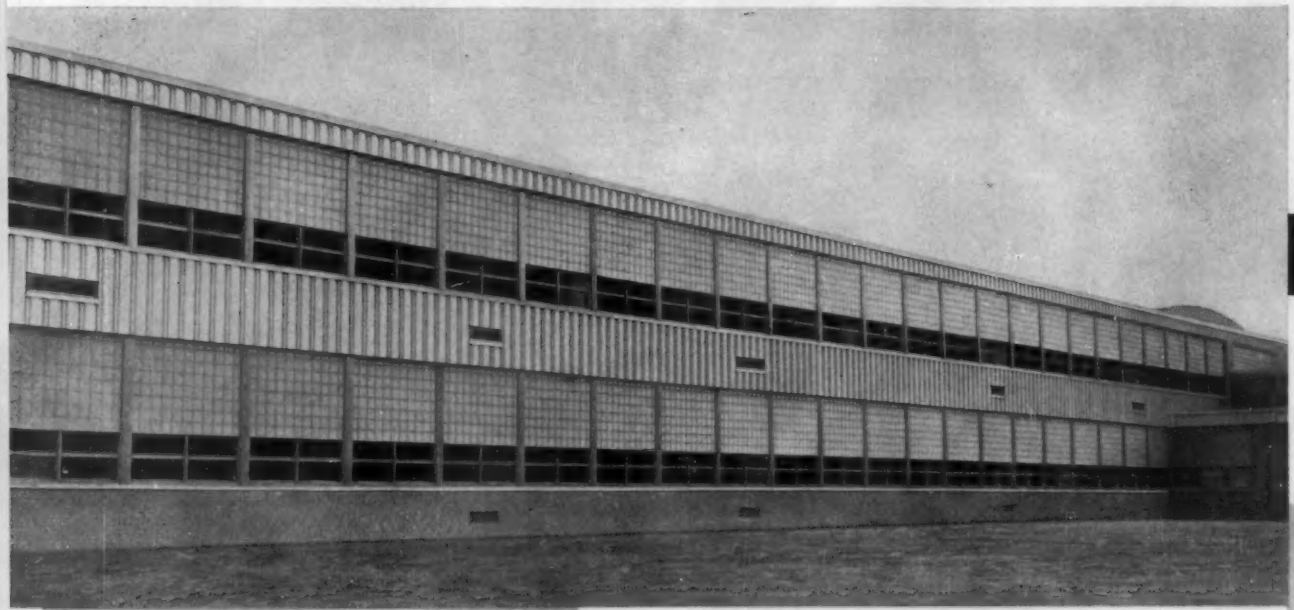
CERAMIC TILE

American Olean

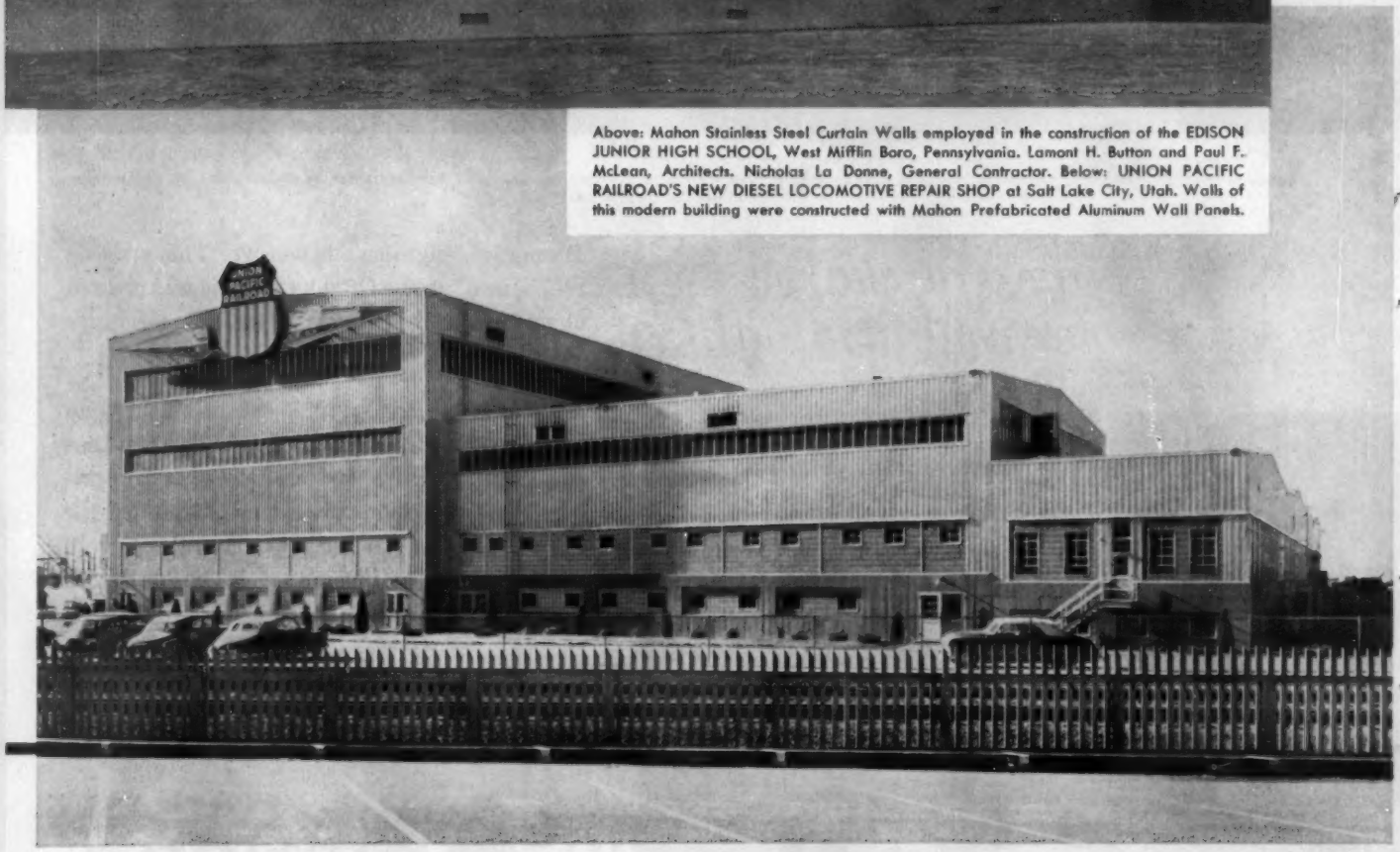
AMERICAN-OLEAN TILE COMPANY
EXECUTIVE OFFICES: 1381 CANNON AVE., LANSDALE, PA.
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Nurses' Station in the Craddock Clinic. Walls are 8½ x 4¼ in 43 Gentian, 97 Gardenia and 60 Persimmon. Color Plate 388.

Mahon METAL CURTAIN WALLS



Above: Mahon Stainless Steel Curtain Walls employed in the construction of the EDISON JUNIOR HIGH SCHOOL, West Mifflin Boro, Pennsylvania. Lamont H. Button and Paul F. McLean, Architects. Nicholas La Donne, General Contractor. Below: UNION PACIFIC RAILROAD'S NEW DIESEL LOCOMOTIVE REPAIR SHOP at Salt Lake City, Utah. Walls of this modern building were constructed with Mahon Prefabricated Aluminum Wall Panels.

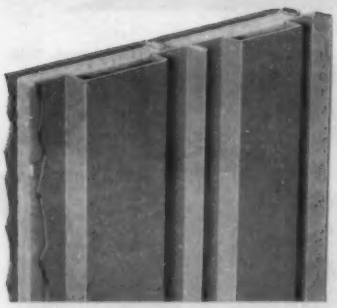


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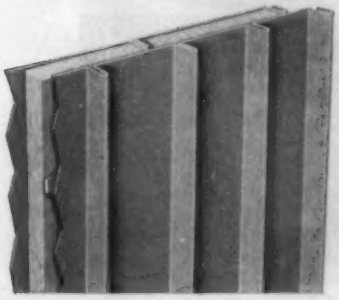
Give You Low-Cost Permanence . . . Produce Attractive Exteriors!

Vertical Joints are Invisible . . . Symmetry of Pattern is Continuous Across the Wall Surface

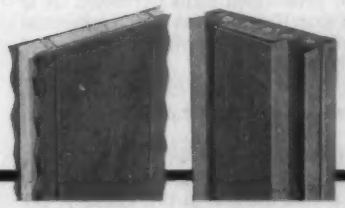
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GALVANIZED or PAINTED STEEL



MAHON FLUTED WALL
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Architects R. D. Peterson and A. T. Auburn tell you in their own words why they chose prestressed concrete for two schools



"In designing the new Lakewood and Wheat Ridge High Schools, in Jefferson County, Colorado, each with approximately 125,000 square feet of floor area, we were faced with a limited budget for the size and facilities required. After careful analysis with our structural engineers, we selected prestressed concrete as the structural system.

"The use of prestressed concrete has resulted in a fire-resistant building at a much lower cost than comparable buildings of the same size and facilities in this area. The completed buildings, including all the built-in equipment under the general construction contract, the cost of land, furniture, site improvements, fees... are within a $2,000,000 budget for each school.

"The successful bidder, with a combined bid for the two projects, decided to set up their own casting bed on the Wheat Ridge site for the double-tee slabs for both projects. The double-tee slabs are being used for all roofs and floors above grade, and are left exposed with a sprayed-on acoustical plastic finish, except where suspended ceilings are provided to conceal piping in rooms above. This results in an attractive appearance at much less expense than suspended ceilings. The auditorium and gymnasium prestressed beams were post-tensioned. This allowed a reduction in over-all height with a consequent savings in cubage and construction cost. The use of pretensioned, prestressed slabs permitted us to design a 40'-0" wide clear span library room with a minimum structural depth. This method was also applied in other areas requiring clear spans with no columns."

Here, again, is a collection of qualities that clearly points out the advantages of prestressed concrete as a construction method.

It is but one example in a growing list of applications all over the country. Roebling's role in the prestressed field goes back to the introduction of the method in this country. We invite inquiries of any nature on the subject of prestressed concrete. We have at hand literature, experience and the *desire* to bring the many benefits of prestressed concrete to your attention. An inquiry to Construction Materials Division, John A. Roebling's Sons Corporation, Trenton 2, New Jersey, will bring a prompt reply.

ROEBLING

Branch Offices in Principal Cities
Subsidiary of The Colorado Fuel and Iron Corporation

CONSULT ROEBLING...FIRST IN U. S. WITH PRESTRESSING AND TENSIONING ELEMENTS

Vina-Lux® Floors with Micromatic Veining Help You Achieve...



MINIMIZE LENGTH . . . MAXIMIZE WIDTH

The even, directional flow of *Micromatic veining* in Vina-Lux emphasizes *length* or *width* very effectively. Here is a flooring that has distinctive beauty plus superior performance – a modern resilient flooring that helps an architect to design *better floors.*

Vina-Lux is a versatile tile that solves many floor problems. It's greaseproof and durable – slip-safe and easy to maintain. Solve *your* floor problems with this outstanding vinyl asbestos tile. Available in 31 colors and 4 styles. Samples are yours without obligation.

Color Shown: V-342, Capistrano

AZROCK FLOOR PRODUCTS DIVISION
UVALDE ROCK ASPHALT CO. | 504a FROST BANK BLDG. • SAN ANTONIO, TEXAS

MAKERS OF VINA-LUX • AZROCK • AZPHLEX • DURACO

Prestressed concrete saves time

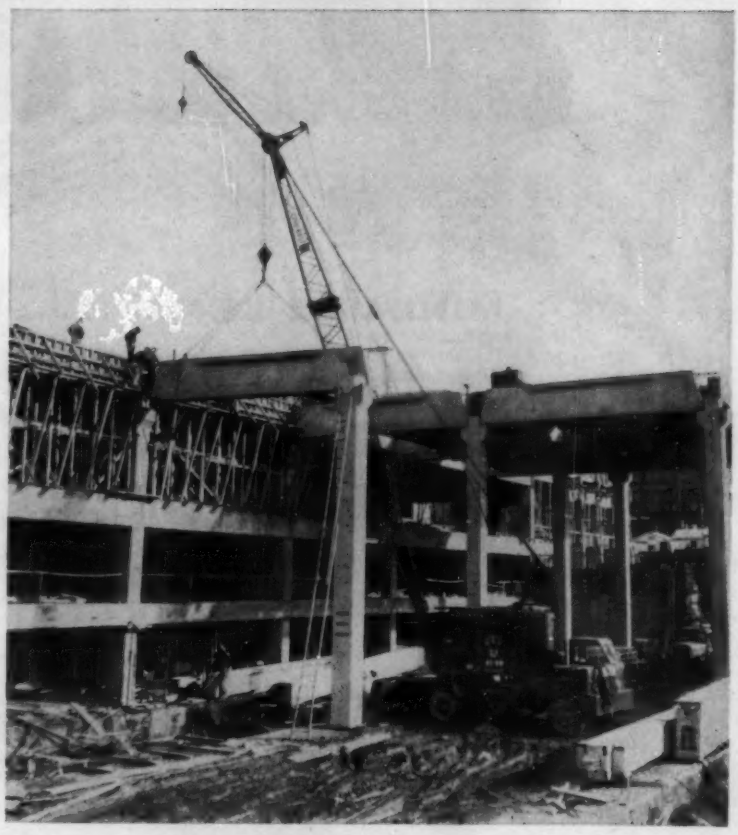


The Press Building is located on East Ninth Street and Lakeside Avenue in Cleveland. Total cost of construction is $10,000,000.

Design and Construction:
The Austin Company, Cleveland

Precast and Prestressed Members:
George Rackle & Sons Company, Cleveland

Welded Wire Fabric Distributors:
J. T. Ryerson & Sons, Cleveland



Placement of Prestressed Beams and Girders—The beams are 2'8" high by 30' long and weigh five tons each; the girders are 4'6" high by 30' long and weigh 11 tons each. These prestressed members were designed to support the unusually heavy loads of 400 pounds per sq. ft.; the live load is 350 pounds per sq. ft. The builders used lightweight concrete prestressed with USS Super-Tens Stress-Relieved Wire for economy and to speed enclosure of the structure before the advance of winter weather.

in the new Cleveland Press Building



Beams and girders are prestressed with extra-straight USS Super-Tens Stress-Relieved Wire

THIS IS THE NEW HOME of Ohio's largest daily circulation paper, the Cleveland *Press*. It's obviously a new kind of newspaper building, built with modern construction ideas and methods—built with *prestressed concrete*.

Construction time cut. The *Press* Building is scheduled for completion early this fall. The use of prestressed concrete helped accelerate the construction schedule before the winter months. Beams and girders were prestressed at a prestressing plant, then shipped to the job site for immediate installation.

Progressive designers are using prestressed concrete in many ways—in bridges, office buildings, factories, warehouses, and schools. The exclusive advantages of prestressed concrete have opened many eyes to its possible uses. In design, prestressed concrete makes possible thinner sections, lower depth-to-length ratios, reduction in dead weight, and permits longer cantilevering. Prestressed concrete is easier to erect because there is no form work to do on the job.

American Welded Wire Fabric—This all-concrete building is also being strengthened and made permanently durable with another famous construction product of American Steel & Wire—USS American Welded Wire Fabric Reinforcement. The precast floor channels, cast-in-place roof and floor slabs, and the slabs on grade were all reinforced with extra-strong, reliable welded wire fabric.

For more information, call or write America's pioneer in the development of prestressing strand: American Steel & Wire, Rockefeller Building, Cleveland 13, Ohio.

USS, American and Super-Tens are trademarks

American Steel & Wire Division of USS United States Steel

Columbia-Geneva Steel Division San Francisco, Pacific Coast Distributors • Tennessee Coal & Iron Division, Fairfield, Ala., Southern Distributors
United States Steel Export Company, Distributors Abroad



Golden Grillwork of Alcoa Aluminum blends beauty of form with color and texture



BUILDING: Industrial National Bank, Miami, Florida
ARCHITECT: Edwin T. Reeder & Associates, Miami, Florida
GENERAL CONTRACTOR: Arkin Construction Company, Inc., Miami Beach, Florida
ALUMINUM FABRICATOR: Metallic Engineering Company, Miami, Florida
FINISHING PROCESSOR: Southern Aluminum Finishers, Atlanta, Georgia

All three elements of fine design—form, color and texture—are masterfully combined in this golden grillwork of Alcoa® Aluminum. Geometric patterns add depth and variety to the façade. The golden color is an integral part of the metal surface . . . for lasting brightness. The unusual texture is an everlasting invitation to the eye. Interiors and exteriors take on new splendor with the limitless form, color and texture possibilities of this new use for Alcoa Aluminum . . . the architect's metal.

Call your nearest Alcoa sales office for technical data and counsel. Or write Aluminum Company of America, 1888-J Alcoa Building, Pittsburgh 19, Pa.

SOLAR SHADING. Sun's rays are deflected, air-conditioning load lightened, by handsome aluminum golden grille.

ALCOA ALUMINUM

Your Guide to the Best in Aluminum Value

"ALCOA THEATRE"
Exciting Adventure, Alternate Monday Evenings

"Low cost **OASIS IN-A-WALLS** the complete solution to cooled water"

Ultra-modern new Howard Building in Providence, R. I., has built-in Oasis In-A-Wall Water Coolers. Architect—Albert Harkness & Peter Geddes, Providence.

The Howard Realty Company, of Providence, R. I., is unusually enthusiastic over the super-compact efficiency of the Oasis In-A-Wall Water Coolers in its new 10-story Howard Building. The owner says,

"We're greatly pleased with the low cost, the ease of installation, and the clean-cut modern look of our ten Oasis In-A-Wall Water Coolers. Everyone concerned feels that they are the complete solution to our problem of providing ample cooled water for each floor."

Versatile Oasis In-A-Wall Water Coolers are easy to mount on joists, in closets, or on a wall. They're built thin to build in —even in an 8-inch wall. In-A-Wall coolers can serve up to four remote fountains with cool, refreshing water.





Specify either of two models. IW-5 supplies 5 GPH for two remote fountains, serves 60 in offices, 35 in light industry. IW-10 has 10 GPH capacity for four remote fountains, serves 120 people in offices, 70 in light industry.

For every building need, there's an Oasis Water Cooler. Line includes models with capacities from 2 to 35 GPH, some with refrigerated compartments, and the famous Hot 'n Cold which also supplies piping hot water for coffee-breaks.

Send the coupon for complete specifications and roughing-in details

OASIS
WATER COOLERS

The Ebco Manufacturing Company, Columbus 13, Ohio
Manufacturers of the most complete line of water coolers
Distributed in Canada by G. H. Wood & Co., Ltd.

THE EBCO MANUFACTURING COMPANY
Dept. 5-G, Columbus 13, Ohio

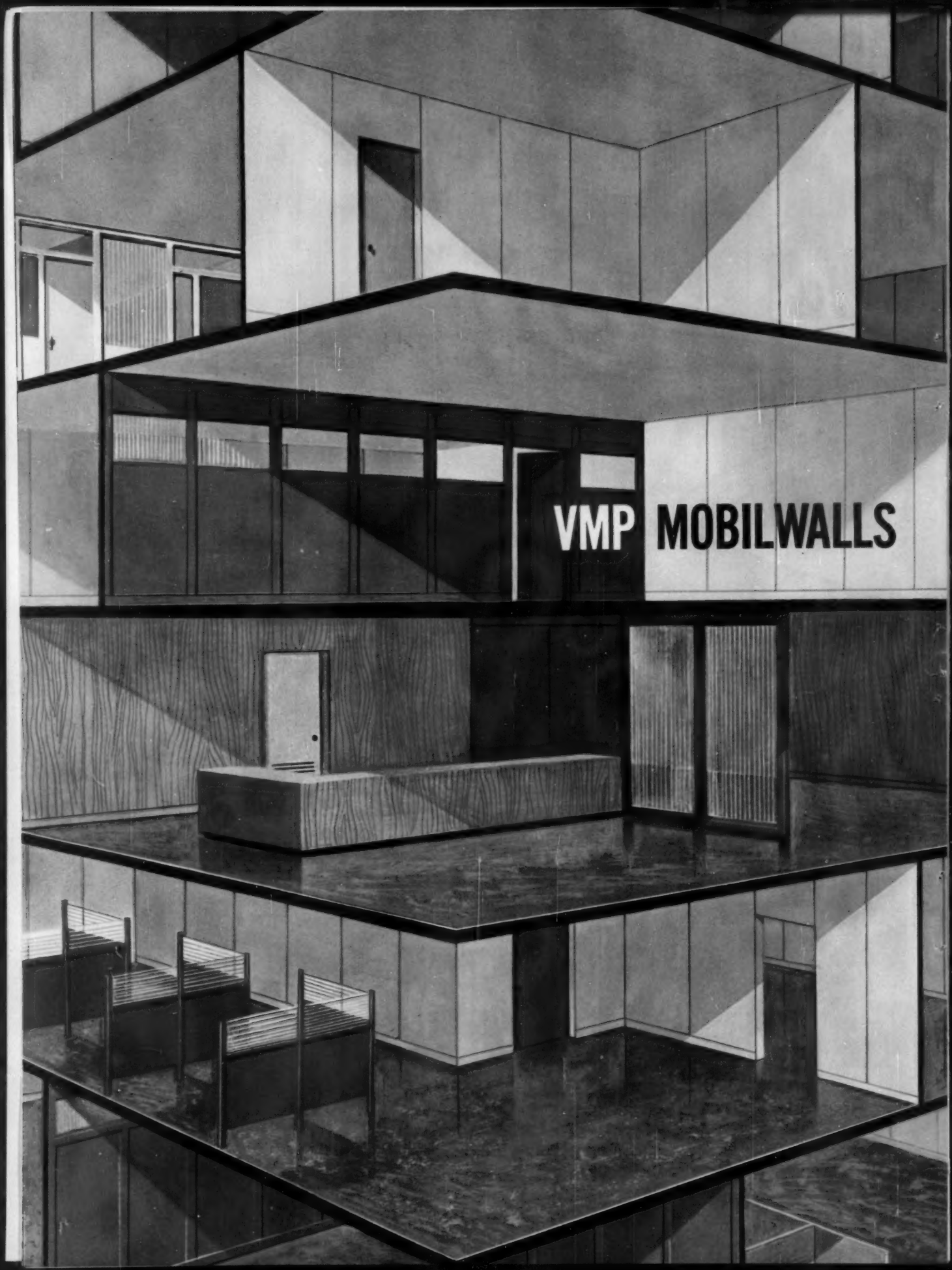
Send specifications and roughing-in details for Oasis In-A-Wall Water Coolers.

name_____

company_____

address_____

city_____ zone____ state_____


VMP MOBILWALLS

Now, plan on permanent beauty for your changeable office interiors.

New VMP Permacolor lets you be sure of a *lastingly* pleased client when you recommend the long-term economy of movable office partitions. Before VMP adopted this remarkable new finish for Mobilwalls, it had to meet test after test . . . each many times more rigorous than real-life wear.

Against acid and alkali far harsher than any cleaning compound you would use . . . against light more bleaching than direct sun . . . against all the enemies of walls . . . the color and texture of new Permacolor proved their ability to *defy time!*

Your nearest VMP Mobilwall representative will be glad to show you the actual test data. Call him today . . . and satisfy yourself that new Permacolor Mobilwalls can assure *permanent* beauty for every changeable office interior you design.

IN NEW PERMACOLOR . . . color that defies time

VMP PERMACOLOR vs GREASY DIRT Left for days covered with greasy dirt, samples of VMP Permacolor Mobilwalls wash clean . . . with their rich, original tone and beauty intact.

VMP PERMACOLOR vs ABRASION Abraded hour after hour, day after day, under a rough, heavy roller, VMP Permacolor Mobilwall samples proved their lifetime resistance to normal wear and tear.

In the last two years, 19 of America's 20 largest corporations installed VMP Mobilwalls . . . such leaders as Ford Motor Company, U. S. Steel, General Electric, Chrysler, and Western Electric. In smart offices . . . high-traffic hallways . . . reception areas . . . laboratories . . . VMP Mobilwalls give the rigidity and looks of permanent partitions. Yet they can be changed almost as easily as an organization chart!

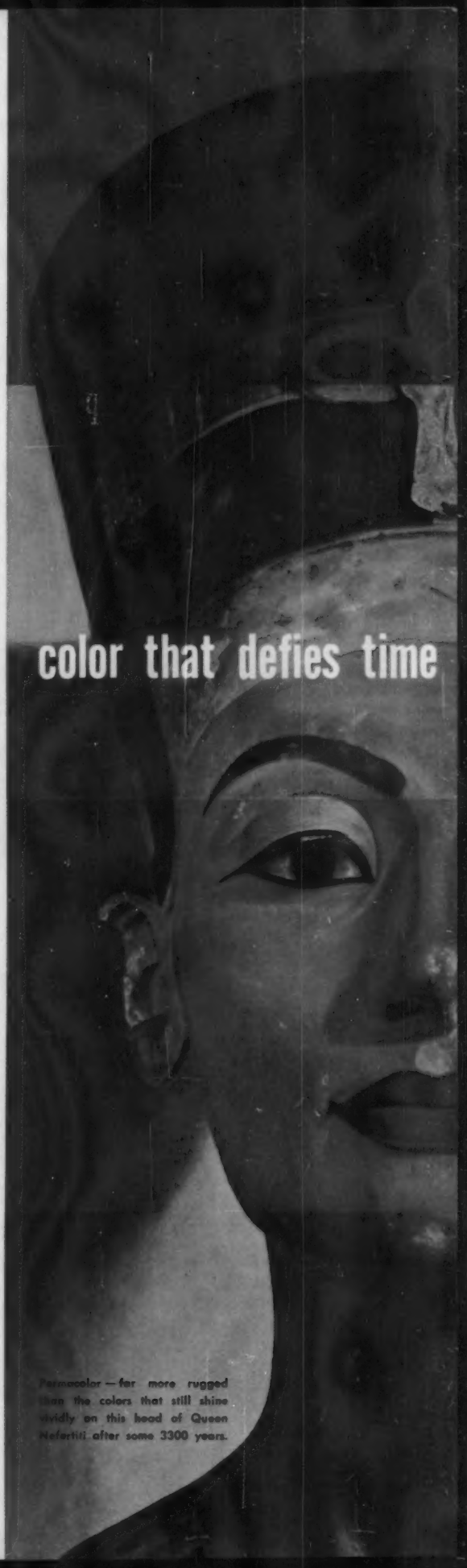
SEE SWEET'S 1958 ARCHITECTURAL FILE, Section 22, Number 22a/Vi for complete specifications and engineering advantages of VMP Mobilwalls. A full range of the most rugged, rigid, interchangeable and easily wired movable metal partitions in the entire modular construction field. *Now finished in time-defying Permacolor.*

VMP

PERMACOLOR MOBILWALLS

Virginia Metal Products, Inc. Orange, Virginia

A Subsidiary of Chesapeake Industries, Inc.



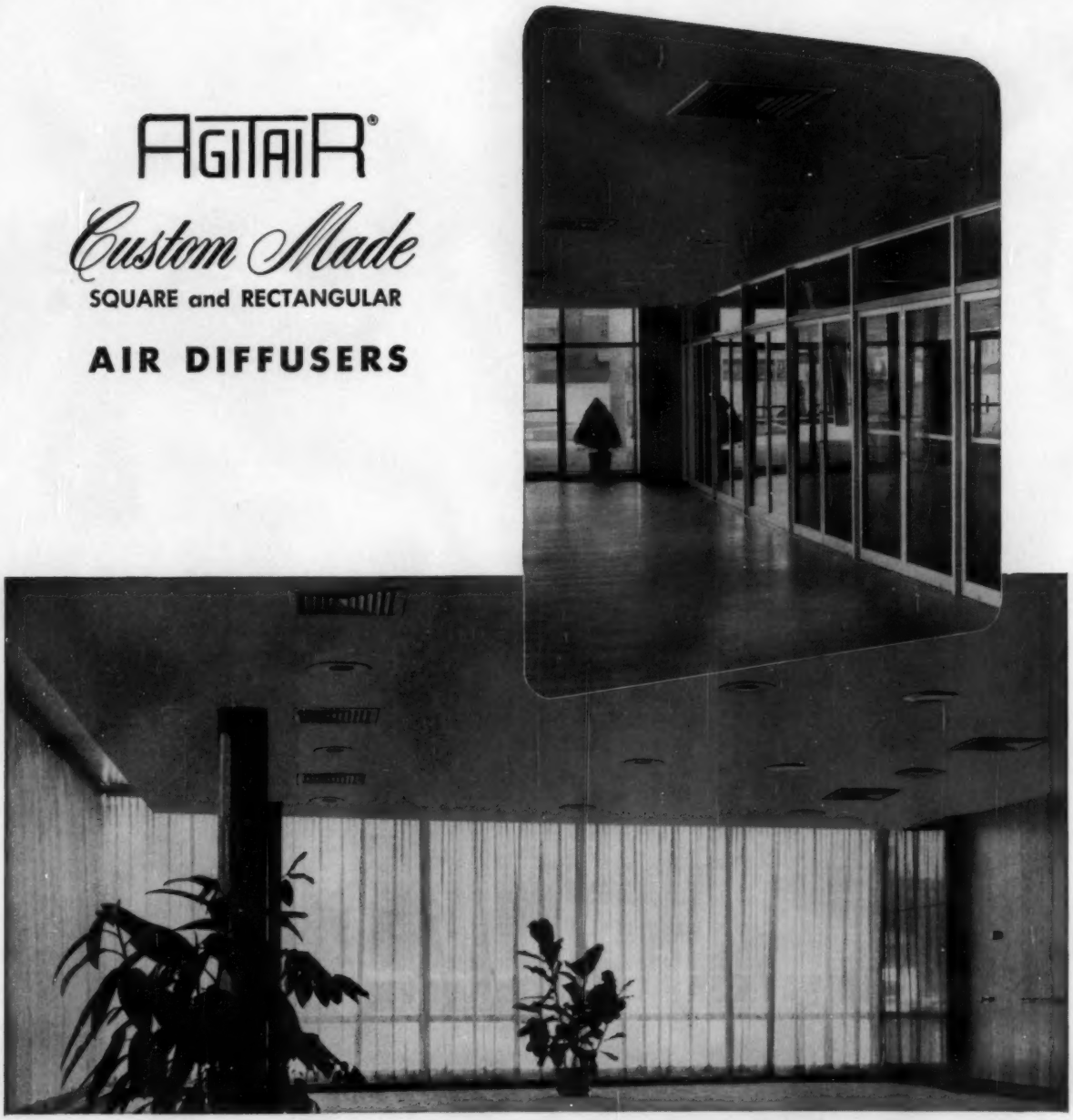
Permacolor — far more rugged than the colors that still shine vividly on this head of Queen Nefertiti after some 3300 years.

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SQUARE and RECTANGULAR

AIR DIFFUSERS



Custom made in unlimited air patterns, AGITAIR square and rectangular air diffusers suit all job conditions... blend perfectly with any interior design.

These AGITAIR diffusers need not be centrally located. They assure draftless, noiseless, equalized air distribution from any location in the ceiling or side wall.

Write for Catalog R107 for complete data on these Agitair Diffusers

THERMOTANK — AGITAIR®

high velocity units • punkah louvers
air diffusers • filters • exhausters

Sold exclusively by representatives for:

AIR DEVICES INC.

185 MADISON AVENUE, NEW YORK 16, N. Y.



Pegged to today's home styles

Bruce Ranch Plank FLOOR

Naturally Beautiful

Furniture by M. Singer and Sons. Photo by Hedrich-Blessing

Inlaid walnut pegs, inserted at the factory, give Bruce Ranch Plank the casual charm of an expensive random-width floor. Appeal is enhanced by the plank effect of alternating 2¼" and 3¼" width strips with beveled edges. The finish is rich medium dark, factory-applied for beauty, durability and economy. Bruce Ranch Plank is installed like any strip flooring, but there's no expense of on-the-job sanding and finishing.

Write for color booklet. See our catalog in Sweet's Files.

E. L. BRUCE CO. BRUCE Memphis 1, Tenn.

Look for these features on the finest freezer doors

. . . Jamison Vap-r-tyt® Lo-Temp Door has unmatched record of dependability and economy

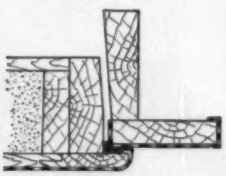
VAP-R-TYT METAL CLADDING

All metal seams locked and soldered

Penetrating bolt holes sealed

Prevents penetration of moisture under high vapor pressure

INFITTING DESIGN

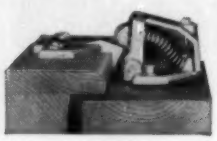


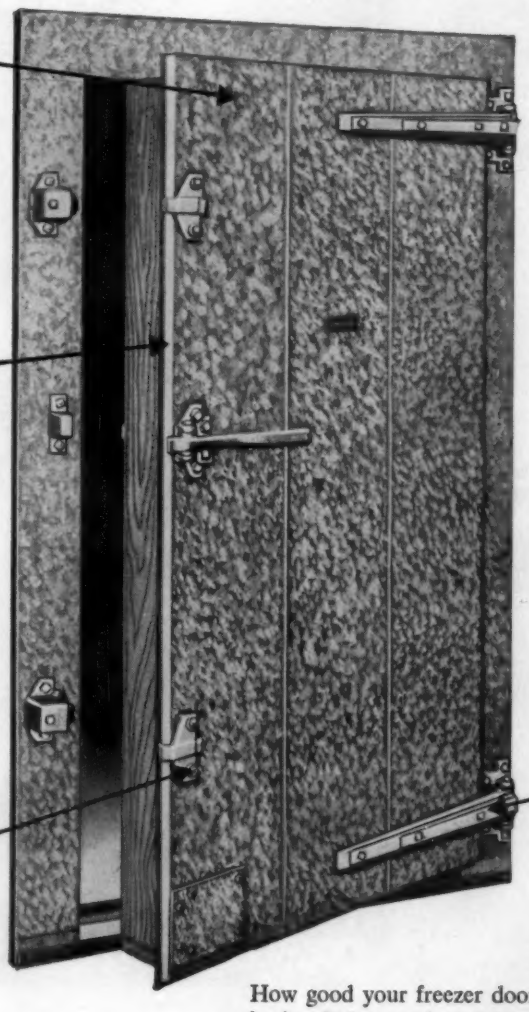
Requires less space than overlap type

Fits *into* wall

Requires shorter radius of swing

E-Z OPEN TWO-POINT FASTENER





JAMISON FROSTOP® (optional)

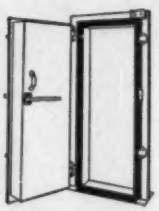


Keeps doors from freezing shut

Safe temperature range eliminates dangers of overheating or condensation

Permits selection of any temperature between 60°F and 120°F

Carries Underwriters' Laboratories Inc. label



ADJUSTOFLEX HINGE



How good your freezer door performs depends on its basic design and construction. Jamison Lo-Temp Vap-r-tyt doors—proven through years of service in all types of installations—are today's economical answer to modern freezer operation. Write today for catalog Section 4 to Jamison Cold Storage Door Co., Hagerstown, Md.

JAMISON

COLD STORAGE DOORS

More new school buildings opening with UNIT® locks

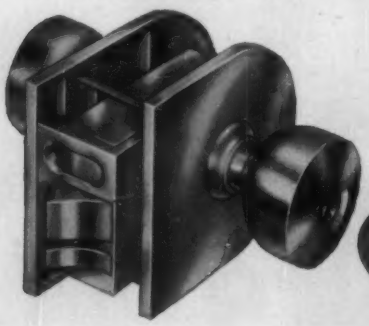
Corbin UNIT Locks offer the ultimate in door styling . . . with a look and feel of solid luxury no other lock can equal. They are specified for economy, too. UNIT Locks feature a one-piece assembly that installs far easier and faster, for less dollars per door. Permanently-aligned lock mechanism never needs adjustment, virtually eliminates maintenance and wear.

Have your Corbin representative show you these finer locks. There are many strikingly simple UNIT Lock designs (including the Titan design shown) to complement every architectural treatment, for public and commercial buildings and luxury homes. P & F CORBIN DIVISION, The American Hardware Corporation, New Britain, Connecticut.

CONSTRUCTION FEATURES

• Cast brass, bronze or aluminum trim, in all popular finishes • Internal parts of long-wearing non-ferrous metal or zinc-plated dichromated steel • Positive deadlocking • Famous Corbin master ring cylinder provides unusually flexible keying system and maximum security • Accepted by Underwriters' Laboratories for all Class B label doors.

For Exterior Doors: Heavy Duty UNIT Lock Titan Design 704 (illus.). For Interior Doors: "900" Series UNIT Lock Titan Design 904.





Dartmouth College Faculty Apartments, Hanover, N. H. Architects: E. H. & M. K. Hunter



Madison (N.J.) High School. Architects: Licht & Johnson

CORBIN "880" OVERHEAD DOOR CLOSER

Extra-heavy indestructible construction makes this new door holder ideal for school service. Far greater wearing area and holding power than similar-type holders. Front-mounted ON-OFF lever for easy adjustment. Top-riding slide stays clear of dirt, grit.



CORBIN UNIT locks

HI-LO, AMERICA'S FASTEST SELLING "FLOATING" GLASS DOOR . . .

because of design beauty, engineering, simplicity and more premium quality features than any other door in its price range

CHECK THESE FEATURES AND YOU WILL CHOOSE HI-LO

1. Corrosion resistant alumilite finish
2. Flat threshold, with full contact track
3. Warp proof, rigid tubular construction
4. Floats on adjustable nylon ball bearing wide contact rollers
5. Permanent fingertip operation
6. Positive door alignment
7. Weather proofed completely
8. Luxurious high styled hardware
9. Damage proof locking mechanism with adjustable keeper
10. Jump proof screen (stays on track)
11. Single or double glazing
12. Single glazed Hi-Lo now in heights to 8 feet
13. Maintenance free, install it, forget it
14. Exclusive sculptured exterior pull–Schlage lock optional

Write today for new brochure showing the versatile applications and complete details of this fabulous economy door.

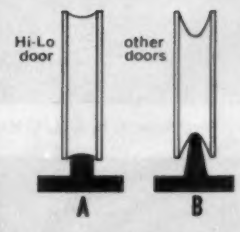
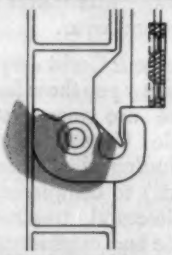


Diagram A. Hi-Lo's wide roller-track contact — positive alignment, longer wear. **Diagram B.** Pinpoint contact causes indifferent door alignment and greater roller wear.

NEW HI-STYLED HARDWARE!

Beautiful full grip handle of sparkling lucite, with new "V" shape throwbolt lever, has damage proof locking mechanism. Note how throw bolt slips under keeper.





Exclusive new damage-proof locking mechanism allows keeper to retract throwbolt without damage. Adjustable keeper features permanent locking contact.



EIGHT FLOORS OF HI-LO DOORS COMPOSE MEXICO CITY BUILDING FRONT

The Maria Lazar medical building, with its facade of Hi-Lo doors, used as windows, set in a frame of black and brown marble, contains 12 Hi-Lo units 8′ long and 5′ high; the luxurious penthouse has one entire terrace wall of Hi-Lo sliding glass doors. Ground floor, lobby and patio shops have Hi-Lo "floating" glass walls.

That architect Enrique Elias' splendid example of modern Mexican architecture was properly planned was proved when it remained undamaged throughout the earthquakes in Mexico City several years ago. Not a single pane of glass was cracked, yet the buildings around it sustained severe damage to glass as well as structure.

NUDOR

NATIONWIDE SALES AND SERVICE REPRESENTATIVES

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See our catalog in Sweet's Architectural files.

Member SLIDING GLASS DOOR AND WINDOW INSTITUTE

Manufacturers of HI-LO, NUDOR, d'COR Aluminum Sliding Glass Doors and Nudor Horizontal Rolling Glass Windows.

AIA file number 16E



HOW ZINC-COATED STEEL SHEETS KEEPS BUILDINGS–AND ARCHITECTS–LOOKING YOUNG

Today, it's almost axiomatic that the more zinc-coated steel you put to work for you, the more freedom your buildings will have from corrosion—and the more freedom you'll have from customer kicks about corrosion and corrosion-caused maintenance costs.

That's why it pays to use zinc-coated steel sheets in the things you want fabricated (such as wall partitions) and in the manufactured products you specify (such as light troffers, metal ceiling tiles, baseboard heating units, etc.).

Look at the formability, for example. With either electrolytically zinc-coated steel sheets, or continuous process zinc-coated sheets, the tight coating stays tight through the severest fabrication operations. How about corrosion prevention? It's long-lived, uniform, relentless. First cost is low. Maintenance costs are nil. And the results are a lasting credit to your building and your reputation. How about paintability? Electrolytic zinc-coated steel surfaces, chemically treated, are unexcelled for painted products. It lets paint dig in and hold its unbroken smoothness and beauty for keeps.

In electrolytically zinc-coated steel, the name that stands for bonus performance is Weirzin. In continuous process zinc-coated sheets, it's Weirkote. Let us show you how Weirzin or Weirkote will keep your buildings—and you—looking young.

Write for informative brochure on each. Weirton Steel Company, Dept. Q-24 Weirton, W. Va.

WEIRTON STEEL COMPANY

WEIRTON, WEST VIRGINIA

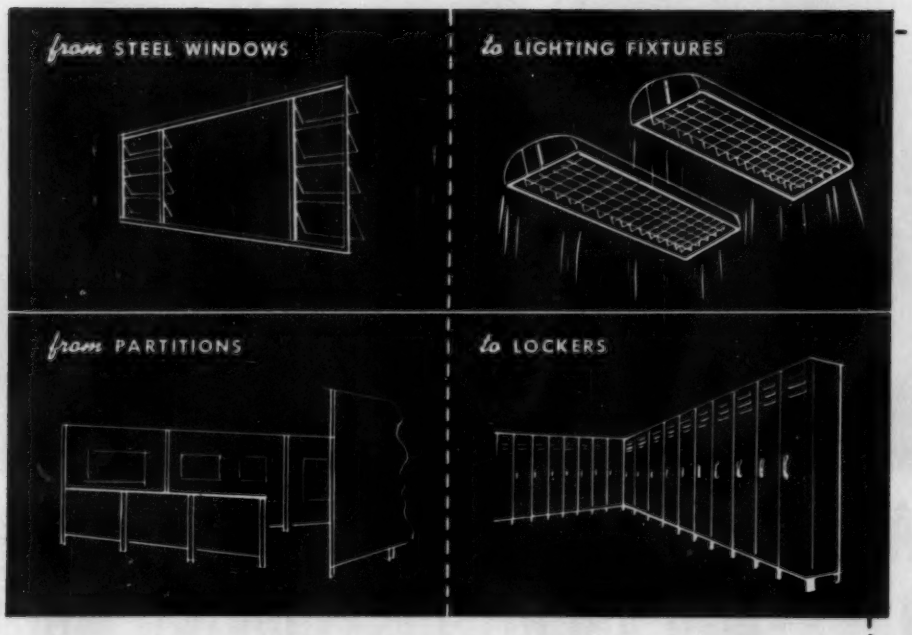
a division of

NATIONAL STEEL CORPORATION

Memo: to Architects

It pays to specify products protected under the paint by

CrysCoat®



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- Radiator Enclosures
- Radios
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- Television Sets
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- Water Coolers

It has been proved year after year on many different architectural products that nothing surpasses Oakite CrysCoat for bonding paint to metal . . . for blocking creeping rust and preventing paint from peeling at nicks and scratches . . . for increasing the ability of the paint to protect against corrosion.

When an architect specifies that steel architectural products be CrysCoated, he is assuring building owners more complete satisfaction with their investment.

For information about CrysCoated products, write Oakite Products, Inc., 83 Rector Street, New York 6, N. Y.

CrysCoat *paint-bonding treatment makes architectural products look better . . . last longer*

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE
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CUSTOM APPEARANCE . . . UNLIMITED FLEXIBILITY

MASS-PRODUCTION ECONOMY



new

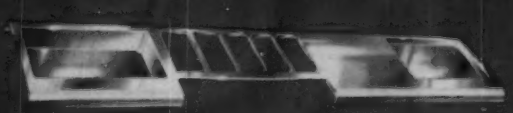
CUSTOM MODULAR® *cafeterias by Bastian-Blessing*

Bastian-Blessing's ingenious* Custom-Modular *design principle means that you now can have a cafeteria line with impressive custom design, and incomparable quality—without a "custom" price penalty! It's as simple as A-B-C:

A from Bastian-Blessing's really complete line of newly designed cafeteria service equipment . . . arranged in any sequence—to fit any size or shape space.



B FITTED WITH A CONTINUOUS TOP . . .



C —your choice of any Formica, plastic laminate, or popular metal front—in continuous lengths.



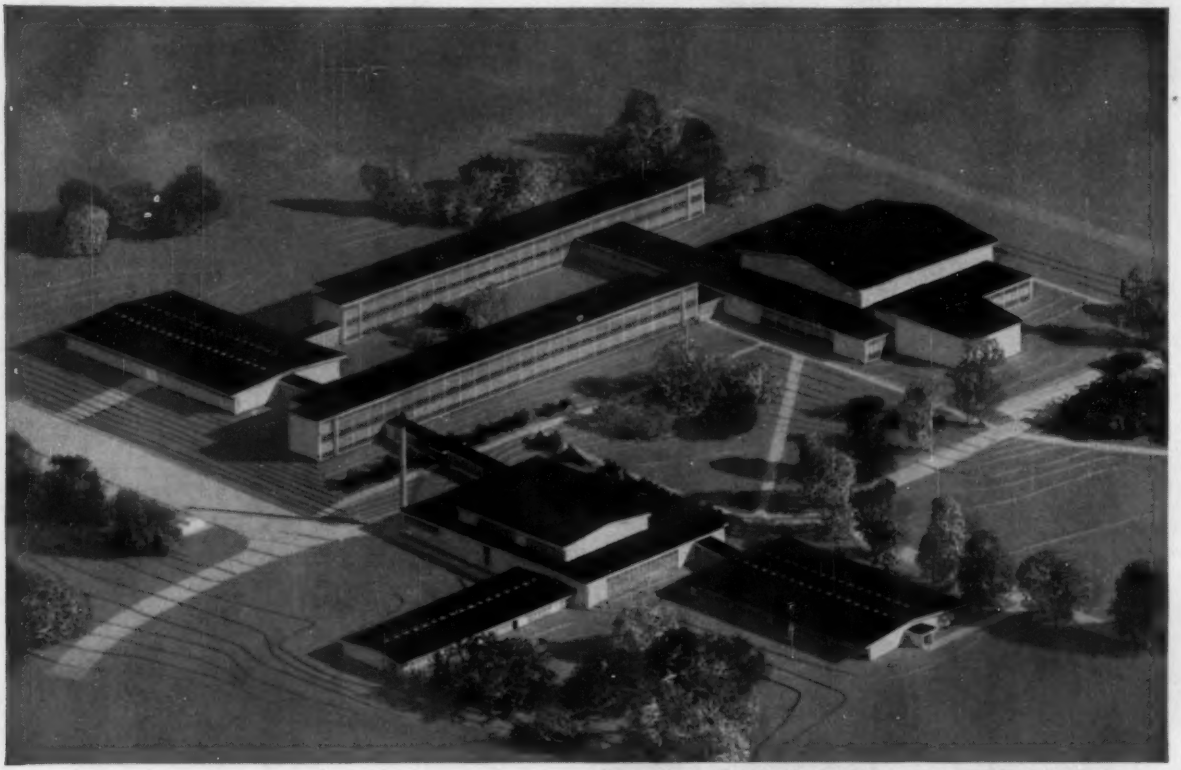
***Send for new catalog No. C-400* . . . showing revolutionary new *Custom-Modular* cafeteria food-service equipment. Write on your letterhead: The Bastian-Blessing Co., 4205 W. Peterson Ave., Chicago 46, Ill., Dept. 4-I.**

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BASTIAN-BLESSING

World's Largest Manufacturer of Fountain and Counter Food-Service Equipment

A continuing series of outstanding schools, churches, office buildings, hospitals and industrial structures using NORTON DOOR CLOSERS



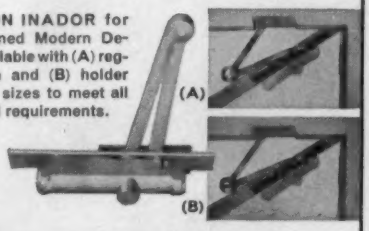
HAARSTICK LUNDGREN AND ASSOCIATES INC.—ARCHITECTS, ENGINEERS
HARDWARE DISTRIBUTOR: WHEELER HARDWARE CO., ST. PAUL, MINN.

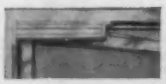
SCHOOL PLANNING THAT LOOKS AHEAD SPECIFIES NORTON DOOR CLOSERS

Burnsville School—Independent District No. 191—Savage, Minnesota

Complete Norton Line Meets Every Door Closer Need

NORTON INADOR for Streamlined Modern Design available with (A) regular arm and (B) holder arm...4 sizes to meet all standard requirements.





NORTON 750: New corner design with concealed arms for all type doors, particularly narrow rail doors.



Norton Surface-type Closers are available for all installations where concealment is not essential.



NORTON 703E: Compact surface mounted type...first closer with extruded aluminum alloy shell.

Here's an outstanding new school building—the result of plans that were made to meet some twenty carefully considered objectives. Among them: (1) The building must be functional; modern beauty without waste. (2) It must be of good materials to stand the test of time. These two factors governed selection of door closers.

Interior doors have NORTON INADOR Closers mortised into the top rail. Their compact, fully concealed mechanism packs all the rugged dependable power of true liquid-type closers plus the reliability, low maintenance and precision workmanship common to all *Norton Door Closers.*

Exterior doors use Norton Surface-Mounted Closers, modern counterparts of Norton Closers still in daily use after serving continuously up to 30 years and longer in some of America's most famous public buildings. For fully illustrated data on these and other models, consult the current Norton Catalog. Write for it today.

NORTON® DOOR CLOSERS

Dept. AR-98 • Berrien Springs, Michigan



Curved roof of "Structoglas" panels, manufactured by International Molded Plastics, Inc., Cleveland, Ohio, at Morris Elementary School, Troy, Michigan.

NO WEATHERING WORRIES HERE!

These glass-fiber reinforced panels are made with PARAPLEX® P-444

The *superior weather resistance* of glass-fiber reinforced panels made with acrylic-modified PARAPLEX P-444 polyester resin is shown in the photomicrographs below. After THREE years of continuous outdoor exposure in Florida, PARAPLEX P-444 test panels show virtually no discoloration or fiber evidence. But notice the progressive degradation of the conventional light-stabilized resin!

For highest *quality* and *durability* in glass-fiber reinforced panels, insist on panels made with PARAPLEX P-444.

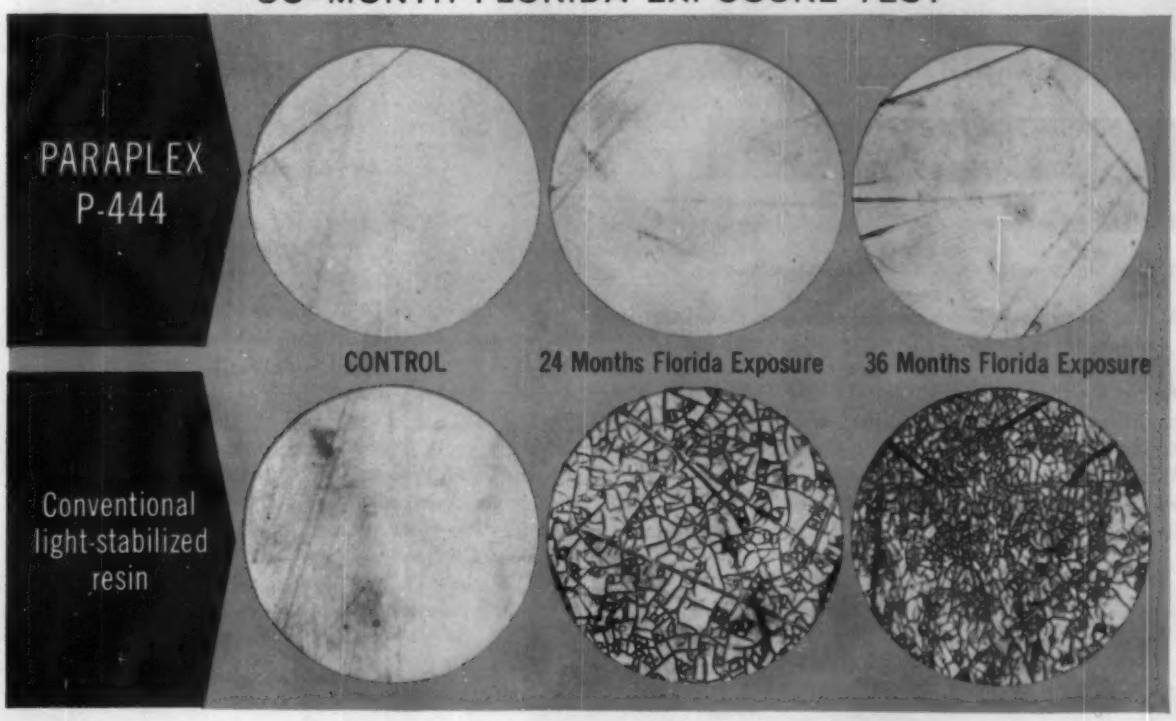
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36-MONTH FLORIDA EXPOSURE TEST





YORK

to make ice rink history in the 1960 Olympic Arena with fantastic new heat pump installation

Artist's drawing of the new Olympic Ice Rink at Squaw Valley, Calif. Architects are Corlett & Spackman, A.I.A., Kitchen and Hunt, A.I.A., Architects Associated. Engineers: Vandament & Dormsted, San Francisco.

PROVIDES ALL 3—

1. **Refrigeration for over 120,000 sq. ft. of ice rink surface**
2. **Heat for spectator areas and all service facilities**
3. **Heat for domestic hot water and the arena snow melting system**

Again, the tremendous potential of the Heat Pump for practical commercial applications is dramatically demonstrated in the York installation for the 1960 Winter Olympics' largest building. A single system will provide over 550 tons of refrigeration at 5° F. for the arena's four huge skating rinks plus more than 5 million BTU's per hour for heating. The arena's 600 meter rink will be the "largest expanse of artificial frozen ice ever refrigerated for skating competition".

York has custom-built, to specifications, refrigeration for such outstanding skating rinks as Yale University; the Steinberg Memorial Rink in St. Louis, Mo.; Lake Placid Arena; Wollman Memorial Rink in Central Park, NYC.—and welcomes inquiries from municipalities, universities, architects, contractors, engineers and private groups. For full details on these installations, and what York can do for you, write Dept. AR,. York Corporation, York, Penna.

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MARIETTA precast concrete wall panels are engineered to today's building needs...



The new Goodyear Research and Development Center at Akron, Ohio, features the use of Marietta panels with lift-slab construction.



Complete design flexibility and choice of many textured finishes make Marietta concrete wall panels extremely functional for buildings of every type. When used alone or in combination with other building materials they present a clean, modern appearance.

Marietta concrete wall panels are available solid or with an insulation core making their 5" thickness superior in insulating quality to a 12" masonry wall.

Easy erection of Marietta wall panels cuts building time and labor costs. In conventional curtain wall construction cast-in clip and bolt fasteners simplify attachment of panels to building framework and in lift-slab construction similar easy attachment methods are used. Snug fitting tongue and groove joints are caulked or mechanically sealed insuring complete water tightness.

With Marietta concrete wall panels construction can be carried out, even in the coldest weather, because there's no costly, time-consuming backing up with brick or masonry. This feature means less dead-load . . . extra floor space.

A WIDE VARIETY OF TEXTURES is available in low cost Marietta precast concrete wall panels from a handsome broomed finish to colorful exposed aggregates of marble, quartz or granite surpassing the appearance of costly solid cut stone. All finishes are permanent and non-fading . . . will not become dulled by weather.

WRITE FOR COMPLETE SPECIFICATIONS. See how Marietta panels can help you add beauty, economy and speed to your next project. Complete erection service available under one cost-saving contract by our own experienced crews. Our engineering department is ready to advise and assist architects, your engineering staff, consultants or contractor in all phases of planning and construction.

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MARIETTA, OHIO

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BIG HELP



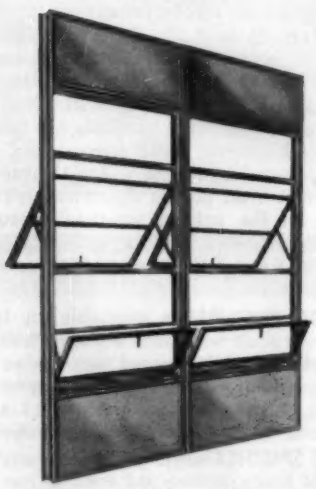
The JOHN J. KANE HOSPITAL, Allegheny County, Pa.

ASSOCIATED ARCHITECTS: Button and McLean — Mitchell and Ritchey, Pittsburgh, Pa.

GENERAL CONTRACTORS: Sherry Richards Co., Chicago, Ill.

BAYLEY

STEEL and ALUMINUM Windows and Curtain Walls



From the first moment windows and curtain walls figure in your planning, Bayley can be a big help to you.

Checking with Bayley, especially in the planning stages, has saved time, cut costs, and solved problems for architects and engineers for *more than 75 years*. (Bayley curtain-wall experience alone goes back more than 30 years.)

This Bayley leadership is not simply a matter of better products. It includes design co-operation — plus *follow-through* to actual building occupancy.

Bayley will gladly show you *pre-engineered* window and wall systems that permit broad originality of wall treatment . . . avoid the costs and delays of fully customized components . . . and give you a short-cut to both client approval and building completion. Your local Bayley representative will welcome a call!

See Sweet's Files (Architectural or Industrial Construction) or send for personal copies of the following Bayley catalogs:

Aluminum Windows
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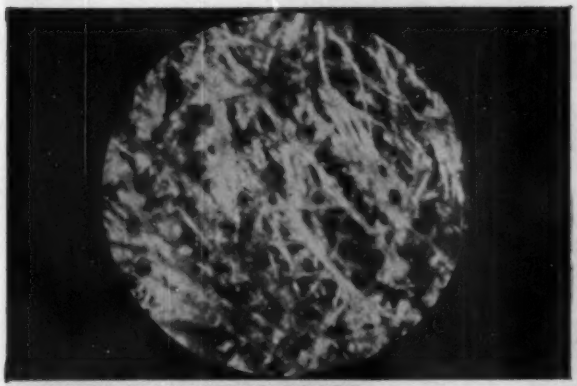
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Barrett®

THE MICROSCOPE PROVES THE DIFFERENCE

New CHEM-FI manufacturing process preserves the fiber strength of natural wood . . . makes Barrett board stronger, more uniform.





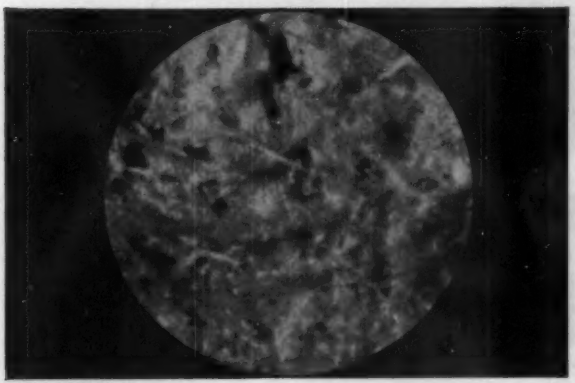
BARRETT INSULATING BOARD (magnified 20 times)

This microphotograph shows the long, interlocking wood fibers that reinforce Barrett Insulating Board . . . give it superior strength, uniformity and uniform thermal resistance. Barrett's CHEM-FI process separates the wood fibers by chemical means, retaining the strength of the natural wood from which it's made.

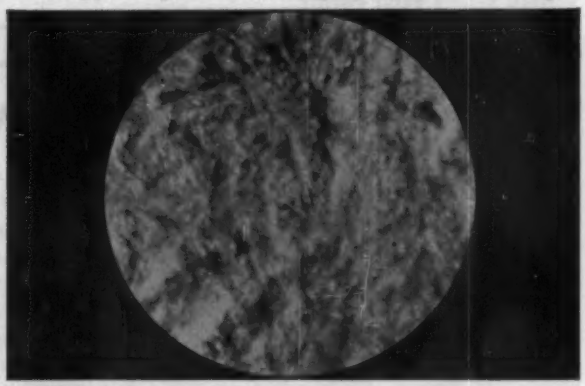


PROCESS B (magnified 20 times)

Notice that insulating board made by Process "B" has little uniformity in its fiber lengths. Some fibers are long, others are powder-like, providing no reinforcement. For a given board density (and thus a given K factor), Barrett's CHEM-FI manufacturing process produces insulating board of maximum strength.



PROCESS C (magnified 20 times)



PROCESS D (magnified 20 times)

Insulating board made by these processes shows same preponderance of short fibers. Barrett Insulating Board using the CHEM-FI process, is made with longer, more uniform fibers, which have a reinforcing effect and substantially improve strength.

Architects—these microphotographs carry an important message for you!

Compare Barrett Insulating Board with that made by three other processes. There you'll find conclusive proof of the greater strength and more uniform insulating power of Barrett Insulating Sheathing and Barrett Roof Insulation. To insulating sheathing, Barrett's CHEM-FI Process brings superior strength for increased resistance to stress, and greater wall rigidity. To Barrett Roof Insulation, it brings uniformly high insulating value and light weight. Specify Barrett Insulating Sheathing and Roof Insulation made by the CHEM-FI Process—the biggest improvement in insulating board since its introduction.

Allied Chemical

BARRETT DIVISION
40 Rector St., New York 6, N.Y.



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ST. PETERSBURG, FLORIDA
John B. Gay—*Architect*
Biltmore Construction Company, Inc.—*Contractor*

Adhesion-type Ceramic Veneer in sunshine yellow was specified for facing at entrances and pylons at both ends of building. Units are 16" x 28" x 1¼".



Create color interest with Ceramic Veneer

As never before, color makes possible full architectural expression—in buildings large and small, government, industrial and commercial. More than ever before, Ceramic Veneer is specified to keynote character through the use of polychrome panels, colorful plain surfaces or sculpture. Because of its unrivaled versatility of form, color and texture, Ceramic Veneer can be combined impressively with all other building materials. Every unit is custom-made by Federal Seaboard craftsmen. Meeting your color requirements is no problem, so vast is the range available. Moreover, the original richness and beauty of Ceramic Veneer's glazed surface can be retained indefinitely by simple soap-and-water washings. For complete data on how well Ceramic Veneer can fit into your plans, write today. Without charge we will gladly furnish construction detail, data, color samples and advice on preliminary sketches.

F S T C

FEDERAL SEABOARD TERRA COTTA CORPORATION
10 EAST 40TH STREET, NEW YORK 16, N. Y. • PLANT AT PERTH AMBOY, N. J.

Architect: SWANSON ASSOCIATES, INC., Bloomfield Hills, Mich. General Cont.: DARIN & ARMSTRONG, INC., Detroit. Sheet Metal Cont.: J. D. CANDLER ROOFING CO., Detroit. Plumbing, Heating & Ventilating Cont.: PAGE PLUMBING & HEATING CO., River Rouge, Mich. 14,500 lbs. of Revere 16 oz. and 32 oz. Sheet Copper for this installation were supplied by COPPER AND BRASS SALES, INC., Detroit.



REVERE SHEET COPPER plays dual role in

WOODROW WILSON JUNIOR HIGH SCHOOL

Wyandotte, Mich.



Because of the dampness that was bound to occur over the swimming pool area, the architect specified non-rusting Revere Sheet Copper for the warm air ducts in this $2,780,606.13 high school. In addition to its enduring qualities sheet copper is readily soldered and formed into any desired shape.

And, for combined thru-wall and cap flashing, the architect specified Revere Keystone* 2-piece Copper Cap Flashing for these reasons:

FREE WALL—It provides the roofer with an unobstructed wall face for the placement of the base flashing. Receiver is laid in during construction of wall, while the insert is snapped in only after all roof and base flashing work is finished.

PERFECT WEATHER-SEAL—Factory-formed angles on the receiver and insert cause latter to hug the base flashing, weather-seal effectively.

NON-LEAKING DAMLOCK—Requires no soldering except for special conditions.

CAN BE DISASSEMBLED—Insert can be removed with a simple tool and used again, with no loss of neatness or snugness, when the built-up base flashing or roofing has to be repaired.

*Patent No. 2,641,203 Other Pats. Pending



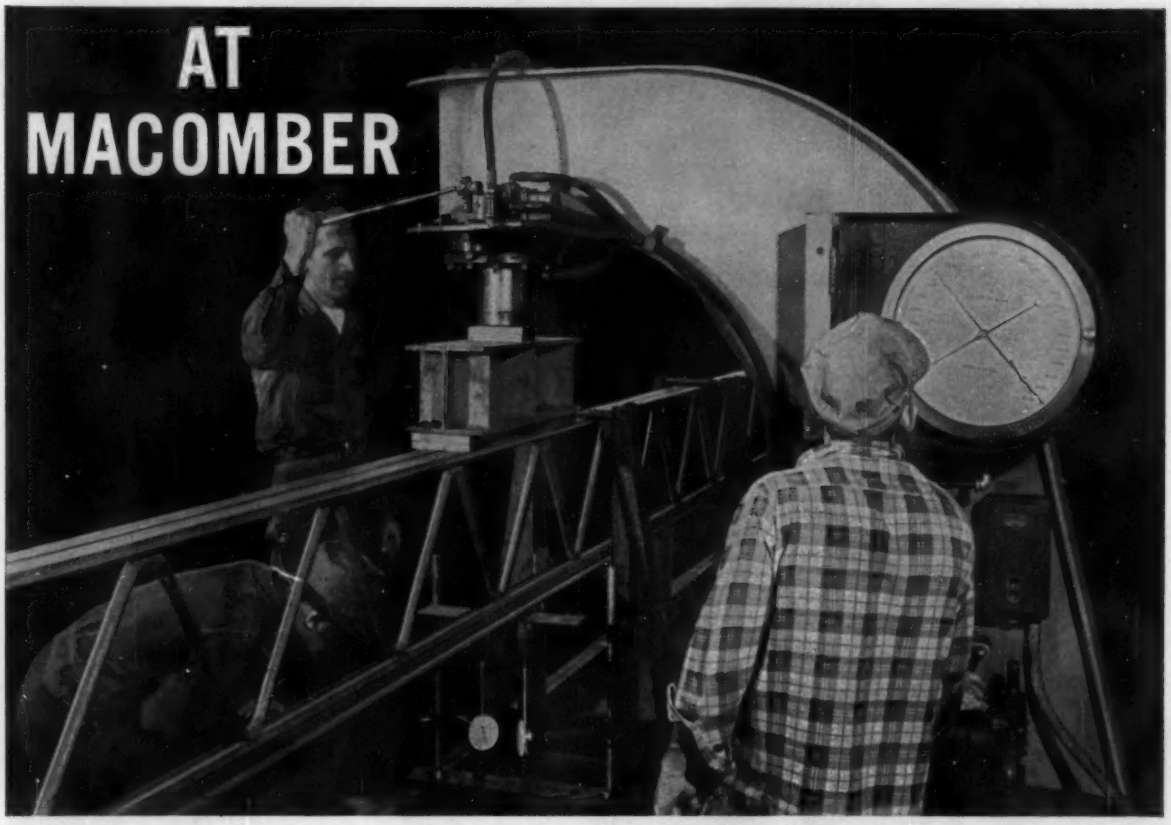
INSET DIAGRAM SHOWS detail of Revere-Keystone 2-Piece Cap Flashing with combination receiver and Thru-Wall Flashing. Receiver is furnished in 49" lengths (48" layup), with 1" interlocking tongue which assures proper alignment. Photo shows standard 4" flat copper receiver with ¼" hook dam.

REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

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Mills: Rome, N. Y.; Baltimore, Md.; Chicago, Clinton and Joliet, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Brooklyn, N. Y.; Newport, Ark.; Ft. Calhoun, Neb. Sales Offices in Principal Cities, Distributors Everywhere.



...Quality Control is CONTINUOUS

Macomber insists every steel framing member must exceed the strength requirements for its job. To assure this, the company employs a crew of trained inspectors who are continuously checking workmanship at every step in production.

In addition, Pittsburgh Testing Laboratory maintains Resident Inspectors to supervise the program. These inspectors are daily load-testing products chosen at random from production runs.

This Continuous Quality Control program is your assurance of the outstanding structural ruggedness of Macomber products.

Specific catalogs are available on all Macomber products.



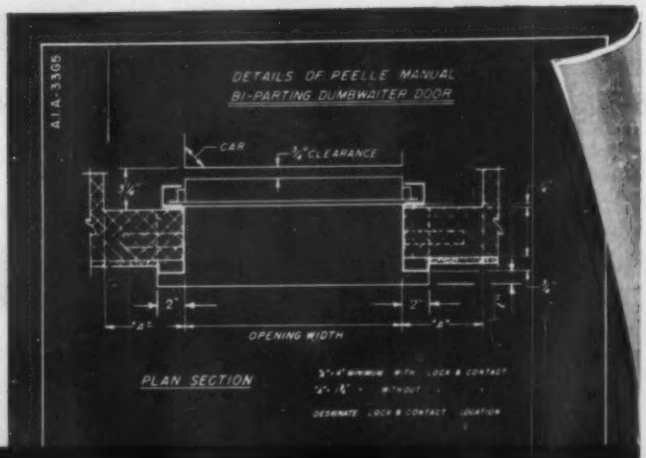
MACOMBER

CANTON 1, OHIO

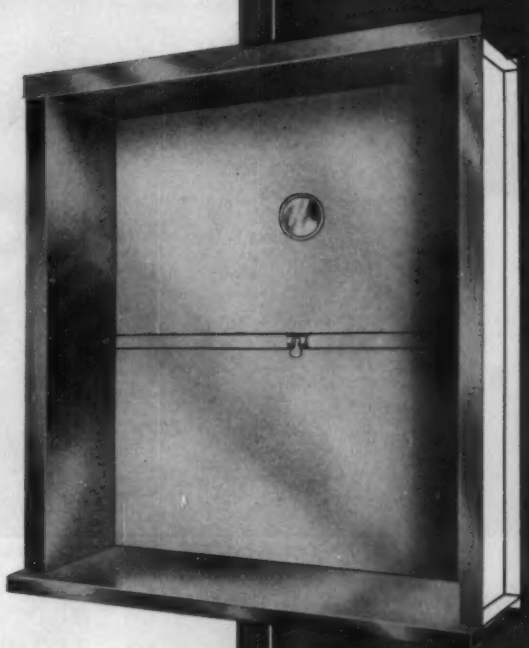
Dumbwaiter specifying suggestions for architects preparing hospital designs

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- Use retiring cams and "true" interlocks . . . for quieter operation . . . to prevent unauthorized access at intermediate floors . . . for safer operation because doors must be closed and locked before dumbwaiters can be moved.

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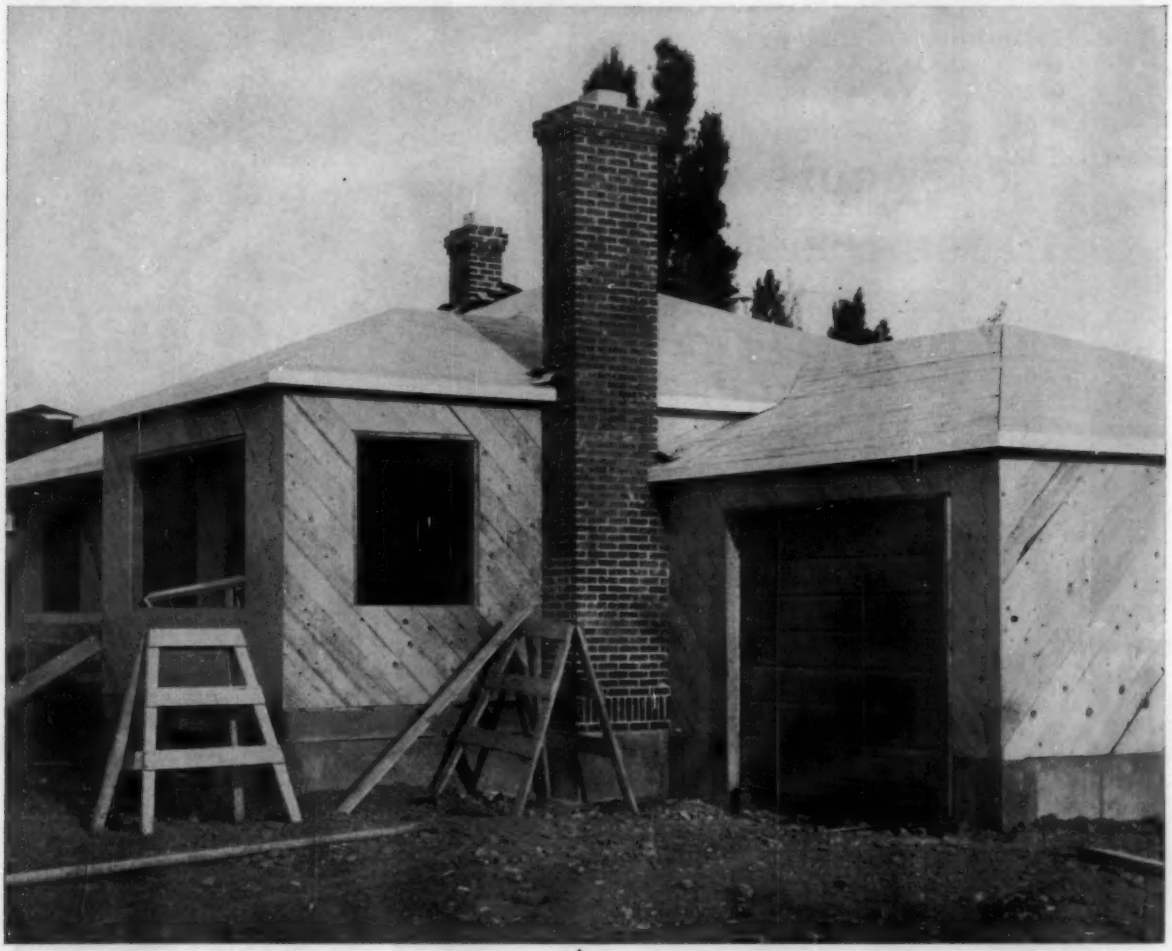
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put a sparkle in her eye...



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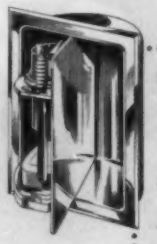
Bathrooms today have become one of the most important "showplaces" in the home. The *right* bathroom accessories and styling are of greater importance now than ever before. A modern, clean bathroom, with beautiful chromium plated Hall-Mack Accessories is the first choice of more and more builders, architects and plumbers . . . and more and more quality-conscious home owners and buyers everywhere.



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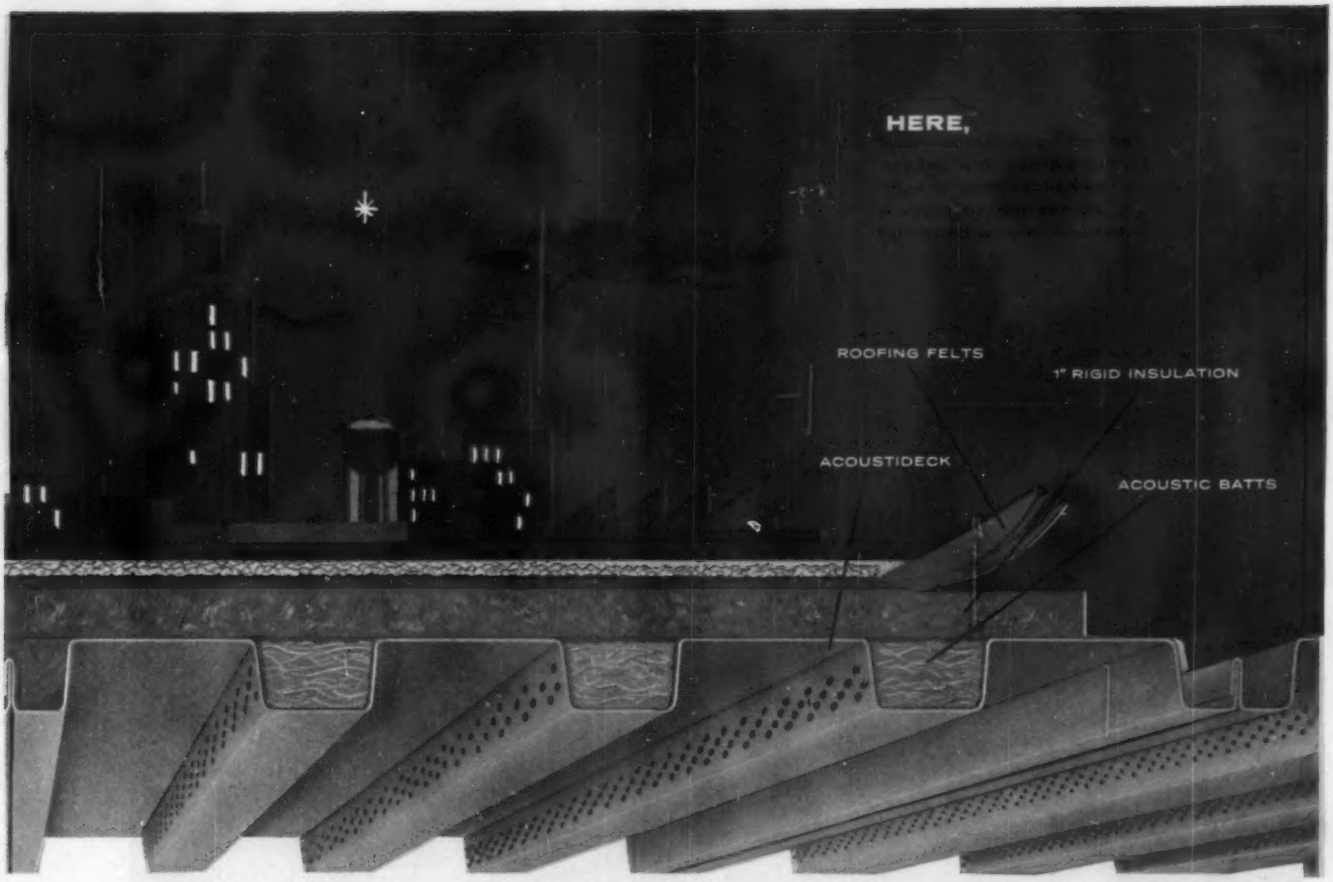


Milcor Acoustideck goes up fast—can be erected in any weather that a man can work.



Bonderized, baked-enamel prime finish applied at the factory cuts field painting costs in half.

new *cuts noise* **NEW** *saves time* *saves money* *new*



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New STEEL roof deck doubles as an acoustical ceiling — saves almost half the cost of similar types!

Now you can give clients the advantages of *steel deck* with *outstanding acoustical values*, at cost savings up to 50%! You enjoy speed of erection. No waiting on the weather—no waiting for wet-mass material to set and dry. You save on structural supports. Acoustideck weighs less than half of equivalent poured-in-place or precast construction — carries normal loads over greater spans. You need fewer bar joists — space them farther apart.

A sound-absorption test conducted by Armour Research Foundation showed Milcor Acoustideck to have a noise reduction coefficient of .70. It satisfies requirements of classrooms, industrial plants, offices, gymnasiums, tank rooms, etc.

The underside of Milcor Acoustideck is left exposed as a ceiling. The fluted design — with the Bonderized, baked-enamel primer—has a clean, modern appearance.

There's more you should know about Milcor Acoustideck. It's too new to be found in Sweet's Catalog File. So write today for copy of Catalog 241.

RD-17

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The new Physical Education Center at Montana State College brings 1.6 acres under the circular roof, seats 10,000 to 15,000 without a single obstruction to view—at a cost of only $9.90 per square foot for the main arena.

Inside, the beautiful playing floor was treated with the finest gym floor finish available—Hillyard TROPHY.

As in the case of many other famous field houses, TROPHY was chosen for its unique properties:

- Official abrasion index highest of any gym finish tested.
- Lightest known color, which brings out full flooring beauty—helps both players and spectators to see every play clearly. A TROPHY floor is ideal for televising!
- No-glare (matte finish) and non-slip surface that invites fast-action play. UL listed "slip resistant."
- Bone-hard, smooth finish that repels dirt, grease, water, stains—ends rubber burning—makes maintenance easy and economical.

TROPHY is the outstanding first choice of architects, coaches, school administrators. Today, more than 15,000 of the nation's finest gymnasium and arena floors are Hillyard-finished.



Ask the Hillyard "Maintaineer®" in your area for complete data on how to lay out gym games and for specifications for modern specialized treatments on every type of floor. He'll be glad to serve as your "Job Captain" when your floors are being treated.



The Hillyard Maintaineer is "On Your Staff, Not Your Payroll"

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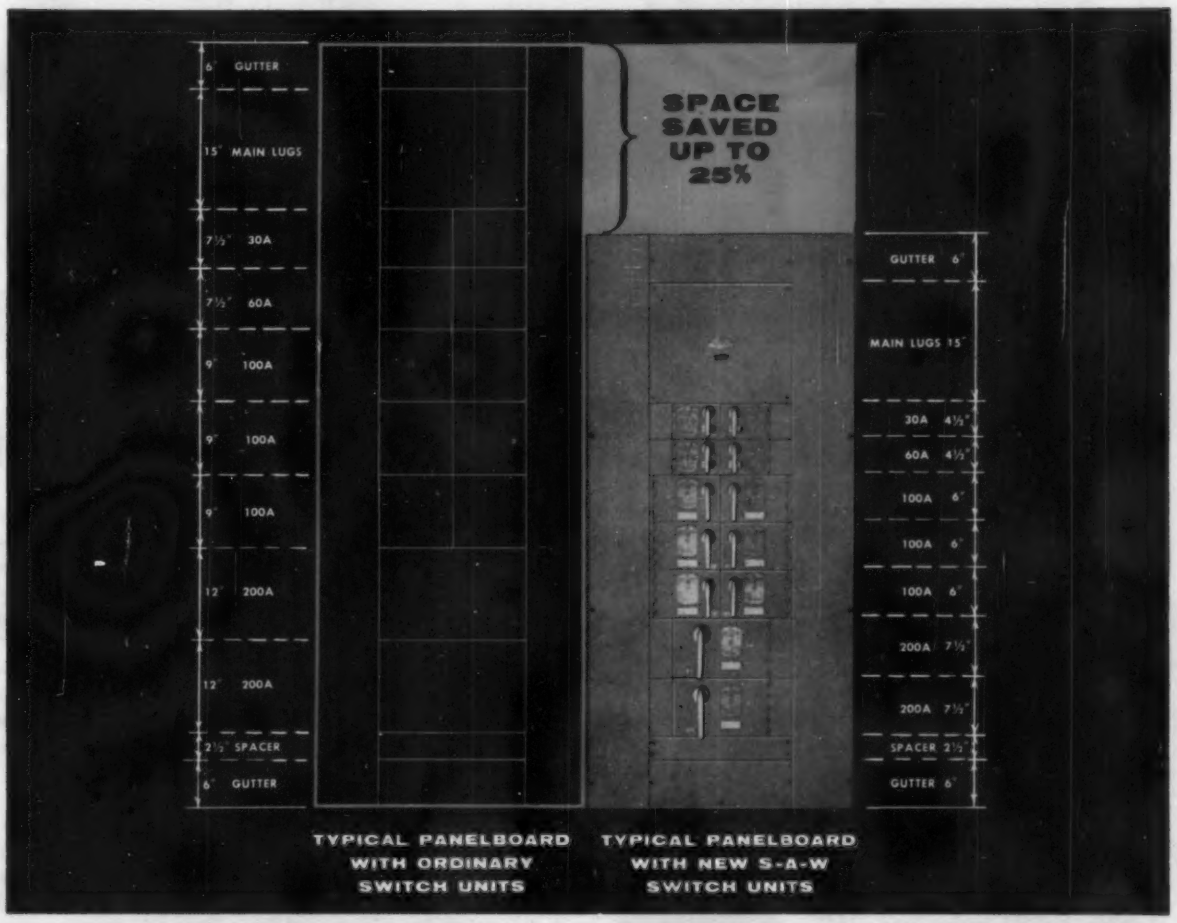
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A-2

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Rotary operated, with famous arc-proof quick-make, quick-break mechanism. Continued use keeps the heavily silver-plated full-floating roller contact permanently clean and polished.

Another engineering advance by Frank Adam! These smaller space-saving S-A-W Shutlbrak switches present several exclusive advantages:

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Capacities of the new S-A-W switches are the same as ordinary switches of larger size. A full range of ratings is available in a combination of single and twin units. Defeatable interlocked doors insure positive safety. On-and-off padlock feature available.

Construction is the same exceptional quality typical of all FA equipment.

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IMPORTANT NE STEEL JOIST

1 DESIGN Architects and engineers now are offered all types of SJI Approved open web steel joists, based upon 20,000 psi working stress. Open web steel joists approved by the Institute are thus in balance with all other steel used in structures. Greater economy and a more efficient use of steel results.



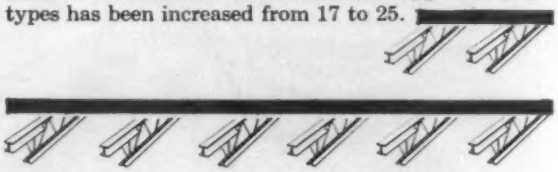
2 COMBINED SPECIFICATIONS

Specifications and load tables for all types of open web steel joists are combined in one handy reference for the designing architect and engineer. "S" series and "L" series joists uniformly designed are covered in this one over-all standard specification.



3 NEW SIMPLIFIED MARKING FOR OPEN WEB STEEL JOISTS To simplify the designation and type mark of steel joists of all types and spans, a uniform system of marking has been adopted. The depth and series identification is incorporated in one type mark to give the designer a uniform system for identification. For example, an "S" series joist, formerly identified as type SJ102 will now be known as 10S2, or a 10″ deep joist of the "S" series and a #2 chord section. A joist identified as 24L06 is a 24″ deep, "L" series joist of a #6 chord section.

4 EIGHT ADDITIONAL TYPES To provide greater flexibility and a more exact application of open web steel joists for given structural loads, the "S" series of Steel Joist Institute Approved joist types has been increased from 17 to 25.



STEEL JOIST INSTITUTE

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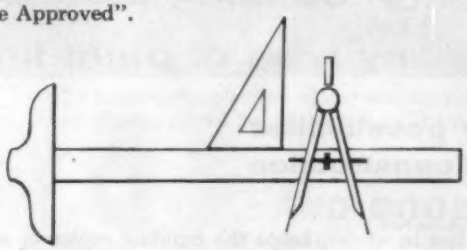
Steel joists of the designations adopted by the Steel Joist Institute and manufactured by the following companies have been investigated and approved by the Steel Joist Institute:

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United States Steel Corporation
ARBUTUS STEEL COMPANY
BETHLEHEM STEEL COMPANY
BUILDERS STRUCTURAL STEEL CORP.
CECO STEEL PRODUCTS CORP.
COLORADO BUILDERS SUPPLY CO.
CONCRETE STEEL COMPANY
JOHN HANCOCK, JR., INCORPORATED
LACLEDE STEEL COMPANY
MACOMBER INCORPORATED
ROBBERSON STEEL COMPANY
JOS. T. RYERSON & SON, INC.
SHEFFIELD DIVISION
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VIRGINIA STEEL COMPANY

WS FROM THE INSTITUTE

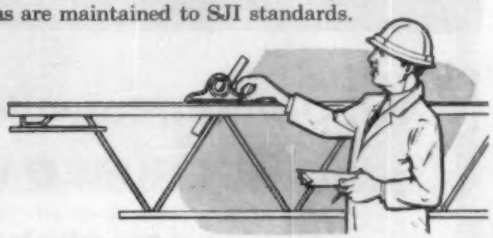
5 ENGINEERING DESIGN CHECK . . . "L" SERIES

To assure designers and specifiers of "L" series open web steel joists of proper uniform design properties, an engineering design check on such joists has been developed by the Steel Joist Institute and will be required before a manufacturer is permitted to indicate his product as "Steel Joist Institute Approved".



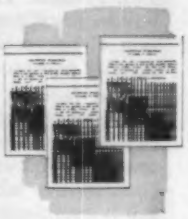
6 QUALITY VERIFICATION PROGRAM . . . "S" SERIES

A Quality Verification Program on all Steel Joist Institute Approved "S" series open web steel joists assures designers and code authorities that these structural members have not only been checked for design and load bearing ability but are subject to a continuing program of inspection by an independent laboratory at the Steel Joist Institute member company plants, to provide assurance that actual fabrication and production conditions are maintained to SJI standards.



7 NEW LOAD AND SPACING TABLES

Although the SJI Approved open web steel joists to be manufactured under the new SJI Standard will not be available from member companies before January 1, 1959, a new comprehensive load and spacing table is offered the architects and engineers for use as of October 1, 1958. This will permit inclusion of the construction economies of the new balanced design steel joists in many structures now in the planning stage.



STEEL JOIST INSTITUTE APPROVED SJI

FREE! *Write for new standard specifications and load tables.*

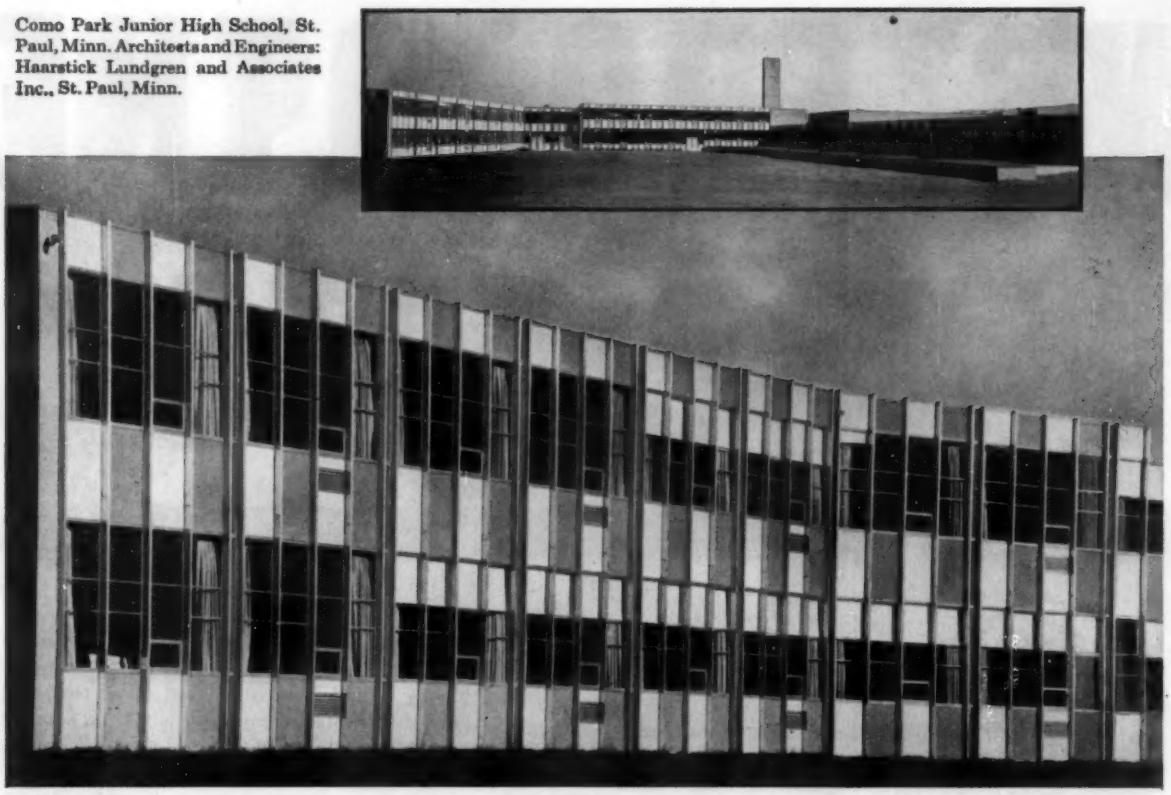
See our insert in Sweet's Architectural File 2c/St

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DuPont Circle Bldg.
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☐ Please send me a copy of your new Standard Specifications and Load Tables.

Name_____
Company_____
Address_____
City_____ Zone____ State_____

Como Park Junior High School, St. Paul, Minn. Architects and Engineers: Haarstick Lundgren and Associates Inc., St. Paul, Minn.



NOW! Johns-Manville TRANSITOP® building panels are PRE-PRIMED to take any type of paint finish

... provide unlimited color possibilities in economical curtain-wall construction

PRE-PRIMED Transitop panels give architects and builders new freedom in the use of color as an expression of decoration in both exterior curtain wall and interior construction.

The factory pre-primed coat, on both faces of Transitop panels, eliminates priming on the job, acts as a first face coat. J-M Transitop will accept any good grade of paint of any type or color. Labor and painting costs at the job site are reduced. A decorative color job is completed faster.

A variety of decorative effects are possible by combining painted Transitop panels with various shapes, sizes and finishes of spandrel- and mullion-type construction.

Johns-Manville Transitop is an insulating structural panel, consisting of an impregnated core faced on two sides with incombustible Asbestos Flexboard® sheets. The core of the impregnated insulating board cuts heat loss in winter, keeps the building cooler in summer.

Panels 4′ wide by 8′ up to 12′ in length speed construction, save on costs. Because Transitop panels weigh only 4.7 lbs. per square foot in 1-9/16″ thickness, they reduce the dead-load factor. This permits lighter framing and less expensive construction.

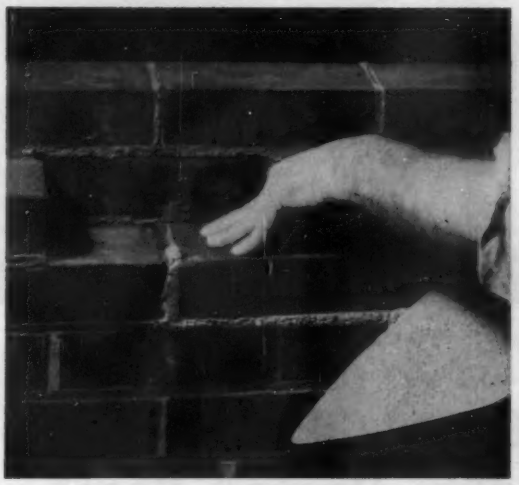
Find out more about how you can save on construction cost by using Transitop panels for insulated curtain walls, as free-standing or structural interior walls, for roof deck construction. For illustrated brochure "J-M Asbestos Transitop," write to: Johns-Manville, Box 158, New York 16, N. Y. In Canada, 565 Lakeshore Rd. E., Port Credit, Ont.



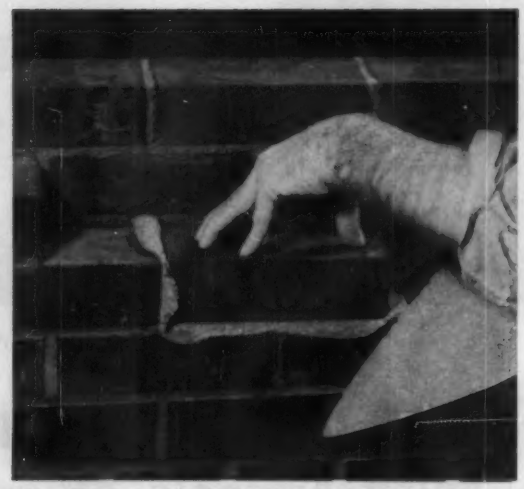
JOHNS-MANVILLE

JOHNS-MANVILLE JM PRODUCTS

BRIXMENT MORTAR
Is More Plastic



To compare the plasticity of any two mortars, try shoving a brick into place, with a full head joint. The more plastic the mortar, the easier the work. Try this with Brixment mortar!



AND GOOD PLASTICITY
IS THE FIRST REQUIREMENT OF GOOD MORTAR

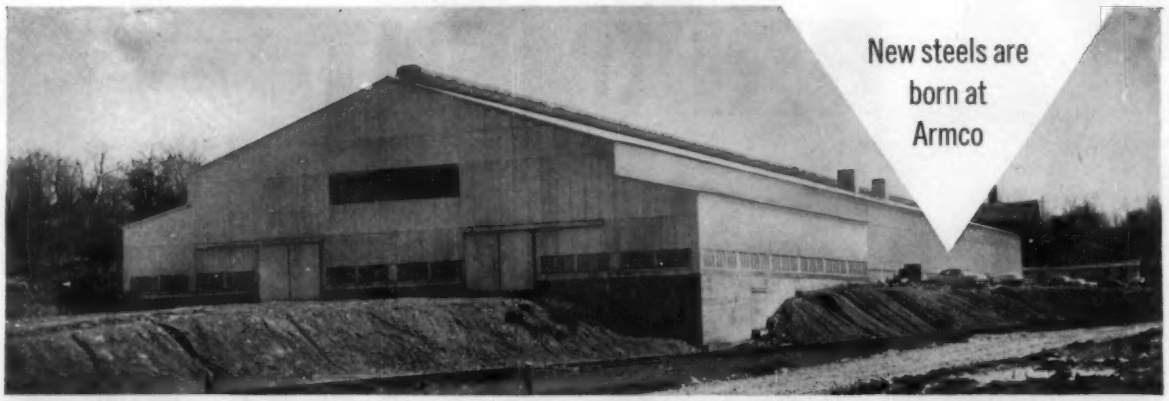
One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness, and its resistance to the passage of water.

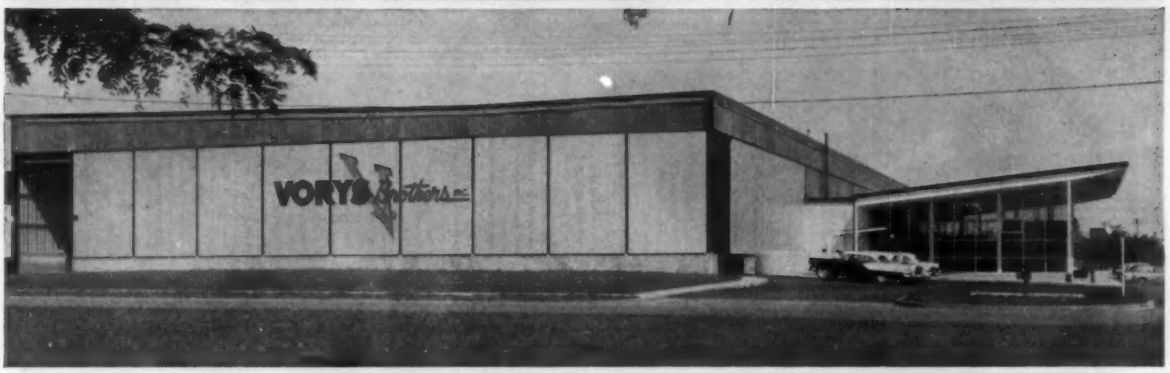
One of the outstanding characteristics of Brixment mortar is its unusual plasticity. Because of this plasticity, a bag of Brixment will carry three full cubic feet of damp sand and still be as plastic as 1-2-9 cement and lime mortar.

Brixment mortar's exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and the joints well filled.

LOUISVILLE CEMENT COMPANY, LOUISVILLE 2, KENTUCKY

Cement Manufacturers Since 1830





For durability and strength at low cost specify Armco's Aluminum-Coated Steel

Armco ALUMINIZED STEEL Type 2 offers you a low-cost building material that has the strength and rigidity of steel plus the atmospheric corrosion-resistant properties of aluminum.

ALUMINIZED STEEL is sheet steel coated with aluminum on both sides by a special hot-dip process. It is specified for building panels, roofing, roof deck, rolling doors and similar applications because it assures long, dependable service at low cost.

Proved Corrosion Resistance

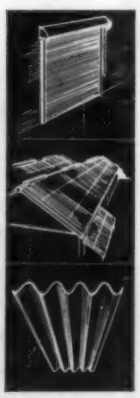
Exposure tests started 19 years ago show that in a mild industrial atmosphere the aluminum coating lasts at least 3 times as long as an unpainted coating on commercial galvanized sheets. The aluminum coating on these test samples is still protecting the base metal.

High Strength

ALUMINIZED STEEL has the structural strength and resistance to fire damage that only steel can offer. Standard design specifications are used.

Now available in Armco's new Deep Corrugation (2⅔" x ⅞"), ALUMINIZED STEEL offers additional structural economy. The greater load-carrying capacity of this corrugation enables you to reduce gage and increase purlin spacing.

For complete information on this special architectural metal, write to Armco Steel Corporation, 2708 Curtis Street, Middletown, Ohio.



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Black that's born BLACK...



Imported CASTELL is saturated with "black gold" — the best natural graphite of more than 99% pure carbon

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That's why it gives you clean, crisp, extremely opaque lines that do not feather or crumble — why you do not have to pause frequently to brush away graphite dust.

Microlet-milling, our own exclusive process, reduces the granules to perfect shape and cohesion, giving you *light-proof* lines of unvarying density for the maximum of cleaner, sharper blueprints . . . lines with remarkable *erasability* that leave no ghosts. The close-textured lead sharpens to a needlepoint and resists breakage even under extra heavy pressure. 20 scientifically-uniform degrees, 8B to 10H.

You owe it to your career to use CASTELL, the Drawing Pencil of the Masters. All good dealers carry CASTELL. Why not call *yours* today.

CASTELL LOCKTITE (with Tel-A-Grade Indicator) for those who prefer a feather-weight holder with degree indicating device. Grips the lead like the jaws of a bulldog to prevent slipping or turning. One hand push-button control reduces graphite stains.

Imported CASTELL 9030 Lead — with the identical graphite that made Castell wood pencil world famous. Usable in all standard holders, but a perfect mate with LOCKTITE. Also available in a kaleidoscope of colors. Packed in plastic tube, 12 leads each.

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WHEN AMERICA BUILDS FOR ECONOMY . . . IT BUILDS WITH CONCRETE



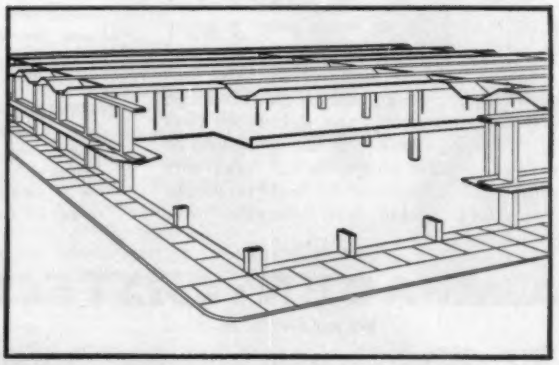
Sears, Roebuck & Company's Tampa store . . .

concrete folded plate roof achieves large, unobstructed floor area

One of the basic requirements here was to achieve unobstructed floor space with economy. Architects Weed, Russell, Johnson & Associates found the answer by using a concrete shell in the form of a folded plate. This construction made it possible to span the entire floor area with only one interior row of columns . . . and suspend the second floor from the roof. The result: 163,715 square feet of *fully flexible* floor space, so important to any retail selling operation.

Folded plate design is, in itself, unique and interesting. And only concrete can give the added boldness of the wide, cantilevered overhang.

It's one more example of the way new uses of concrete are bringing big economies and added vitality to both conventional and modern architecture.

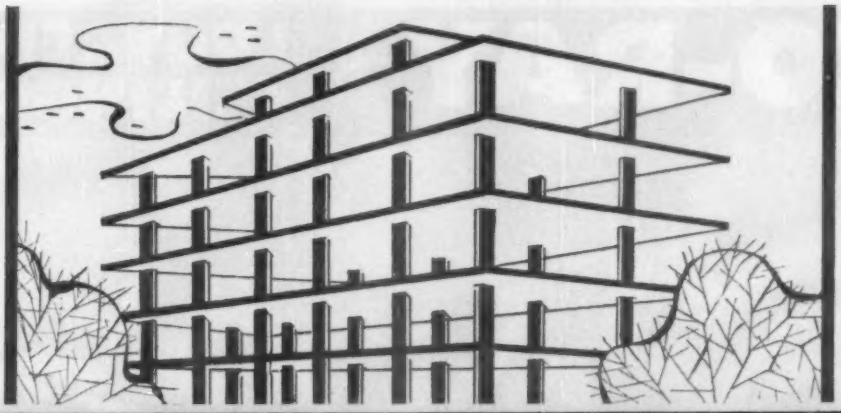


Isometric view showing 125-foot c on c spacing of main columns. Floor slab is supported by 3-inch plates welded together to form a hanger. Hangers are spaced 25 feet c on c.

FOR STRUCTURES... MODERN **concrete**

PORTLAND CEMENT ASSOCIATION

A national organization to improve and extend the uses of concrete





Highest Prestressed Lift-slab Operation Which Had So Far Been Attempted In This Country.

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Architect:
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*The reason for using the Neo-Ray Louvred ceiling in the Olsen Buick Showroom, Altoona, Pa., was that I had used this type of ceiling in a previous showroom and after three years of usage it still is rigid and doing a good job of distributing light to the correct areas as well as giving us a full complete luminous ceiling.

Sincerely,

See our catalog in Sweet's Architectural File sec. 32o NE

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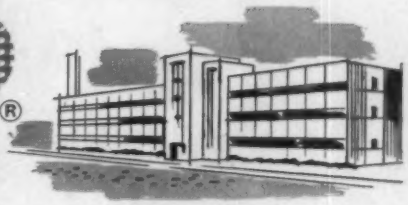
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For beauty and service specify REZO — America's finest Institutional Door! Designed for use in any public building, REZO hollow-core construction provides . . . strength, lightness and rigidity . . . the utility of a solid core door . . . priced to offer important savings in original cost, installation, maintenance. Features include: Air-vented, 2″ x 2″ all wood grid core mortised into stiles and rails; blocked to receive all special hardware; hardware face panels hand matched for grain and color; backed by 105 years of woodworking craftsmanship and a record of over 10,000,000 successful installations.

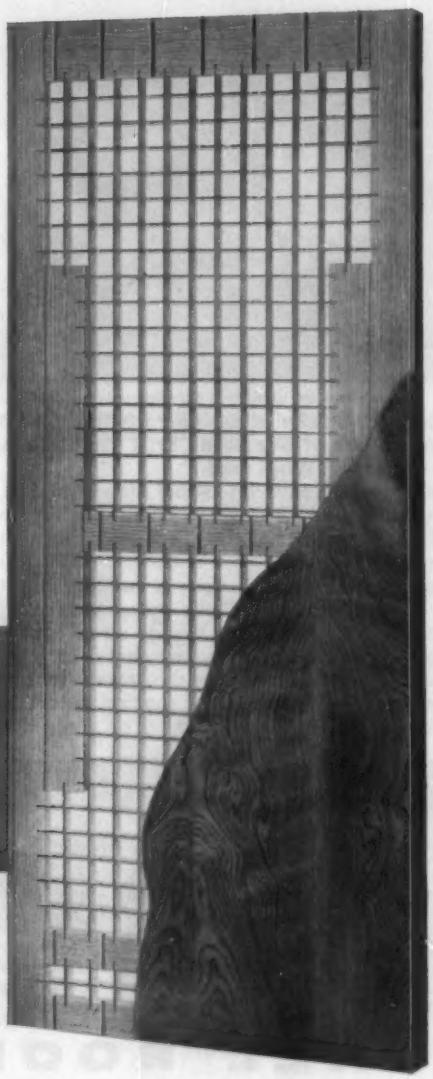
But that's not all. . . . .

SUPER SATIN SURFACE

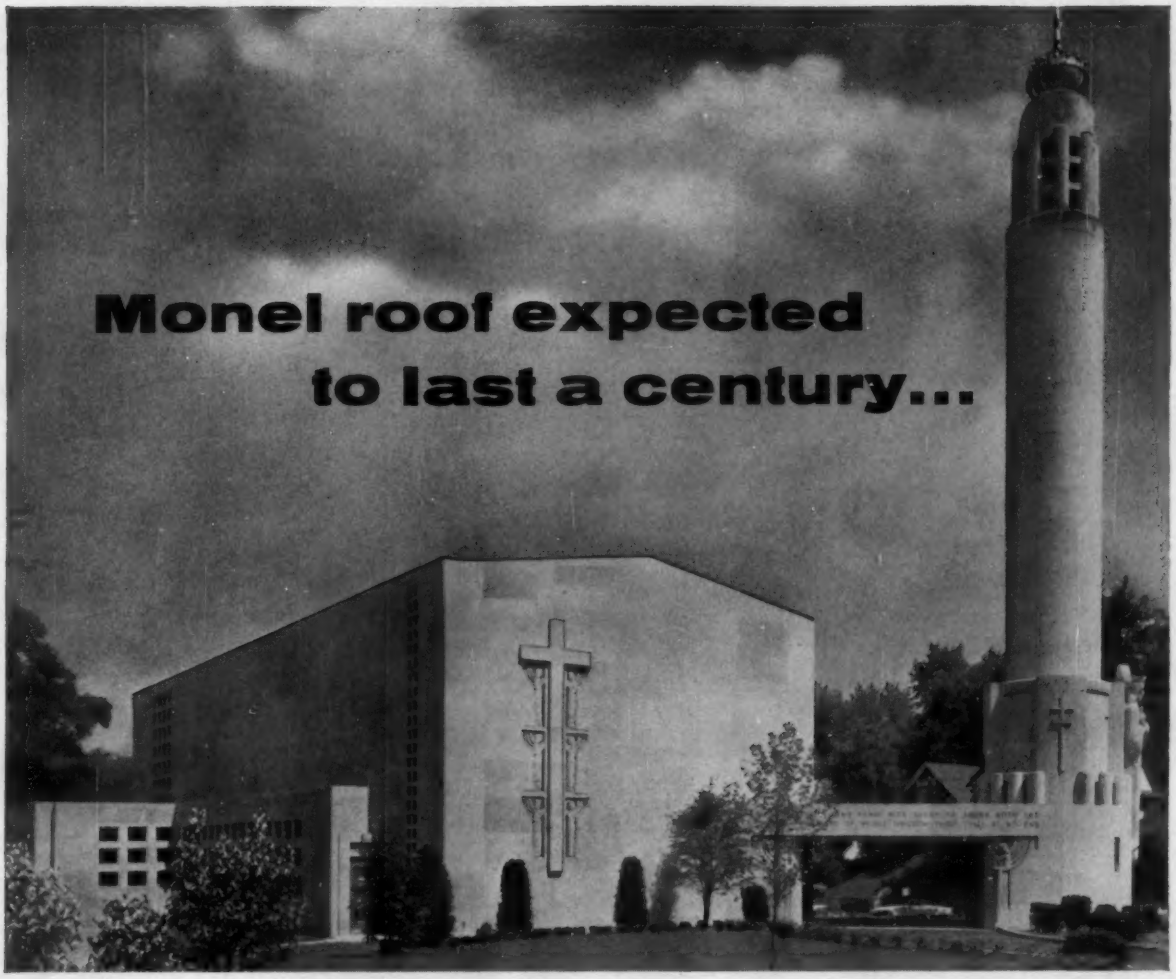
Paine REZO Institutional Doors are available treated with the new SUPER MICROSEAL PROCESS that resists soiling, eliminates grain and fiber raising, provides a uniform surface texture, looks and feels like a hand-rubbed finish. Write for full information today or refer to Sweet's Catalog A.I.A. file 19-F-12.



Hand matched hardwood face panels. | Air-vented core for dimensional stability. | Heavy duty 2″ x 2″ grid core construction.



PAINE
LUMBER COMPANY, LTD.
ESTABLISHED 1853 • OSHKOSH, WIS.



Architect E. J. Schulte, designer of Cincinnati's striking new Church of Our Lord Christ The King, has this to say about the Monel roof.

"I designed this church to stand for a good deal longer than a century and wanted to give it the best possible roof. In my opinion the Monel roof will last as long as the church.

"When an architect designs a building like this he wants to know that it will look the same fifty or a hundred years from now. This roof is an integral part of the design. I wanted a roofing material that would weather to a neutral tone over the years – that wouldn't stain or tarnish. Other metal roofing materials would soon corrode to an unsightly black or green in Cincinnati's industrial atmosphere. Something we definitely didn't want."



Major Installation. 10,000 lbs. of Monel alloy for batten-seam roofing, copings, flashings, and fascia were specified for Cincinnati's new Church of Our Lord Christ The King. Roofers: Weitkamp and Robinson, Cincinnati, Ohio.

Architects, Builders, Clients Benefit

Monel* and Concrete Work Together. Monel nickel-copper alloy expands and contracts almost identically with concrete and masonry.** Using it for flashings and copings reduces cracking and destructive leakage.

Lighter Gauges. The strength of Monel alloy allows use of gauges lighter than other metal roofing materials . . . New crimped Monel sheeting is stronger still, and practically eliminates the need for expansion joints. Crimping is, in effect, one continuous expansion joint.

Ease of Construction. Monel alloy bends and trims readily . . . Easy to solder or weld.

Readily Available. Monel alloy is plentiful from local suppliers. Write to Inco for prices and recommended gauges.

Lower Maintenance. Corrosion resistance, strength, less expansion joints, with crimping – all mean greatly lowered maintenance costs.

* Registered trademark

** Coefficients of expansion Monel = 0.0000078 in/deg F. Concrete = 0.0000080 in/deg F.

THE INTERNATIONAL NICKEL COMPANY, INC.

67 Wall Street New York 5, N. Y.

MONEL ROOFING *for the life of the building.*



Spandrels of Blue Ridge Huetex create unusual color contrast with red brick. Huetex provides the enduring beauty of glass-protected color while its aluminum backing cuts heat gain in summer, heat loss in winter. Western Los Angeles Air Reserve Center. ARCHITECT: Maurice H. Fleishman, Los Angeles, Cal.

Creating beauty like this takes less money than imagination . . . with Blue Ridge Glass

Be as cost-conscious as you have to be, as imaginative as you *want* to be. You can do it . . . with Blue Ridge glass. With glass panels of ever-brilliant color . . . with a glass roof that filters out the sun's heat yet keeps the cool blue-green look of the outdoors. Here are illustrated interiors that have come alive with new sparkle, new play of light and shadow. This is the luxury of beauty and the practicality of low installation and maintenance costs, high insulation value and weather resistance . . . Blue Ridge glass is a true designer's medium.

COLOR. In the Air Reserve Center above, Architect Fleishman chose Blue Ridge *Huetex*® for his spandrels. Rich, colorful ceramic enamel is fused to the back of the tempered, textured glass then protected by a coating of atomized aluminum. With this glass facing the architect knows that the beauty of the color in this building is permanent.



by T. W. Glynn
Director of Product Development
Blue Ridge Glass



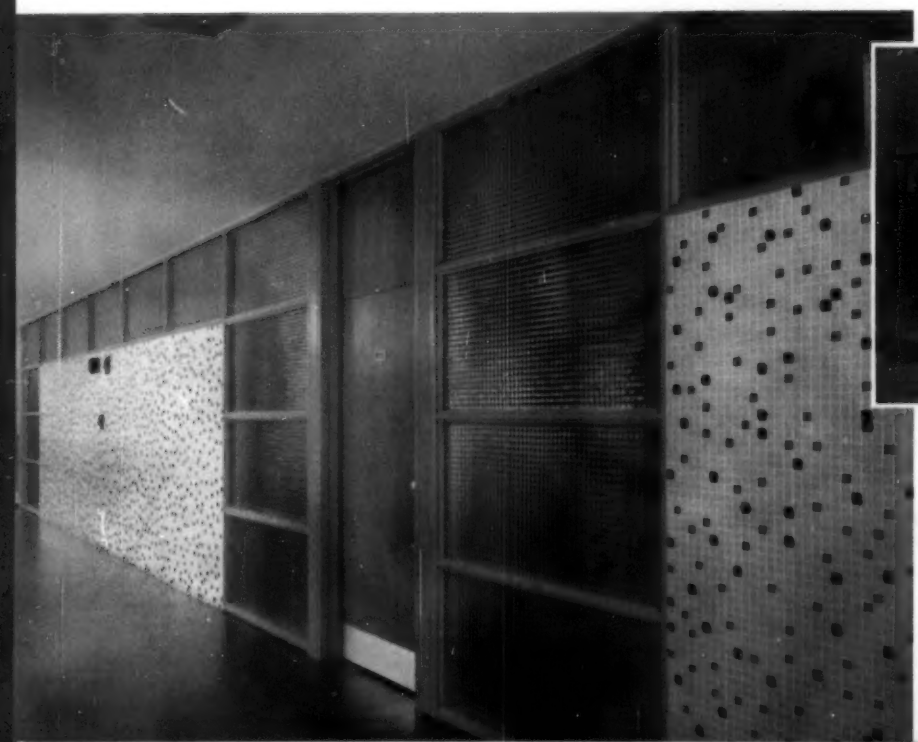
A dramatic band shell in St. Petersburg, Fla., uses wired blue-green AKLO glass. Its roof defies the elements, requires minimum maintenance and is unusually beautiful in the park surroundings. ARCHITECT: William B. Harvard, St. Petersburg, Fla.



AKLO
to control
light and heat

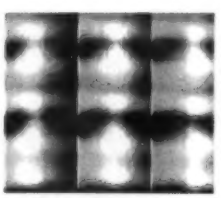


Blue Ridge is a designer's medium





Daylight from this windowed corridor can enter the classroom through Doublex panels. Yet, the students within are not disturbed by movements in the hall. St. Francis Xavier School, Wilmette, Illinois. ARCHITECT: Belli & Belli, Chicago, Ill.



in DOUBLEX, light dances

The bright colors of the room furniture are warmly diffused through these Securit Doors and matching Muralex wall panels. The look is smart and modern, the feeling is private but not confined. Titus Fisher Hospital, Norwalk, Ohio. ARCHITECT: H. E. Beyster & Associates, Detroit, Mich.



MURALEX
. . . privacy plus light



...to achieve distinctive effects

With its refreshingly different band shell, shown above, left, St. Petersburg, Florida, expresses its theme "The Sunshine City" in a most appealing way. The low eaves give ample protection and provide the necessary acoustical properties. The blue-green glass and steel roof retain the fresh, outdoors feeling. The roof is AKLO* ¼" wired glass, with exposed steel painted to match.

MAINTENANCE. Exterior glass facing requires absolute minimum care . . . the colors are permanent, the surface is impervious to the ravages of weather, sun and corrosive moistures that may hang heavy in industrial areas. Interior glass treatments require only occasional washing.

LIGHT AND PRIVACY . . . a combination you achieve so easily with Blue Ridge *Patterned Glass*. Maximum use of daylight is attained while you screen unwanted views or partition offices and rooms. The *Doublex** patterned glass used in the schoolroom walls, at left, provides bilateral lighting without disturbing room privacy.

FLEXIBILITY AND INSTALLATION. The Blue Ridge *Securit** Interior Glass Doors with matching wall panels of *Muralex** patterned glass, shown above, are easily installed. Entire walls can be glazed as simply as windows, or louvered for ventilation. Both exterior and interior glass treatments can be tailored to fit *any* architectural theme.

**Registered Trade-Mark—licensed by Corning Glass Works.*

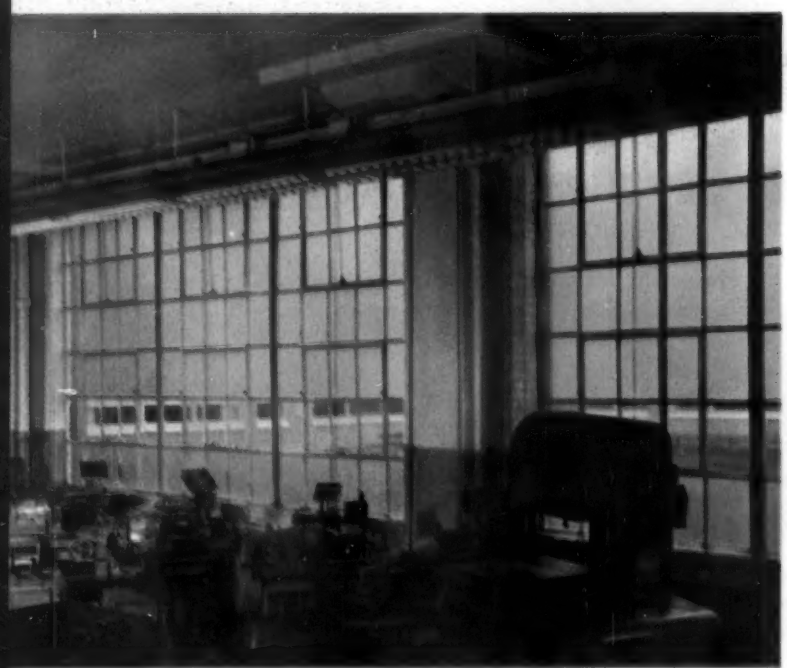
BLUE RIDGE GLASS



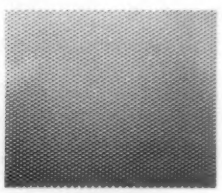


AKLO FINETEX

As sunlight streams through these windows and skylights, it becomes diffused daylight . . . perfect for young eyes. Energy-reducing glare and heat are screened out by *AKLO Finetex® Securit* windows. The gym looks bright, cool and comfortable. Gymnasium at Woodbridge High School, Woodbridge, N. J. ARCHITECT: Alex Merchant Associates, New Brunswick, N. J.



Reglazing with ¼" *Industrex®* wired glass and a single strip of polished wired glass subdued the bright sunlight in this high school shop. Windows were originally all clear, creating a glare problem. Shop is now cheerfully daylighted without straining working eyes. Essex County Vocational and Technical High School, Irvington, N. J. ARCHITECT: Epple & Seaman, Newark, N. J.



INDUSTREX

For additional information on Blue Ridge Glass, look in Sweet's Architectural Files 7a/Li, 3c/BL and 16d/BL.
Also Sweet's Industrial Construction File 3f/Li, Light Construction File 1f/Li and Plant Engineering File 5b/BL.

BLUE RIDGE GLASS

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BI-803 Litho in U.S.A.



Electronic Data Center, Bell Aircraft Corporation, Buffalo, New York. (Inset shows floor plan.)

Electronic data center installed in specially designed building

YOU CAN BE SURE...IF IT'S Westinghouse

Group in conference room includes Robert J. Lichtenthal, Buffalo Electric Co., Westinghouse Distributor; Charles G. Jones, Walter H. Sherry and Associates, Consulting Engineers; George Dick Smith, Jr., Kideney, Smith & Fitzgerald, Architects and Engineers; Carl E. Diesen, Manager of Electronic Data Processing, Bell Aircraft Corporation; and Charles T. Hansen, Westinghouse Sales Engineer.



J-94113-2

Magnetic tape printer in computer room.

Bell Aircraft computer facility required unusual plant planning

The need of Bell Aircraft for electronic computer facilities led to the design and construction of a new building which would meet the special demands of such an installation. The computer center, which will eventually serve all Bell plants, contains complete computer equipment, a communications center for the entire corporation, and all offices and business machines necessary for the operation of such an installation. Expansion area has been provided for a duplication of the present computer facilities.

To satisfy the rigid requirements for control of humidity and temperature in the computer room, it is centered in the building (as shown in the diagram) and is insulated from any outside walls by the corridor, offices and equipment rooms which surround it. The new electronic data center is located immediately adjacent to the Bell Aircraft plant in Buffalo, N. Y., but because of the self-sufficiency of its design and the completeness of its equipment, it could have been situated at any other site selected.

Included in the self-contained center is a Westinghouse electrical system to transform and distribute electrical power to the computer installation, business machines, air conditioning machinery, lighting and other electrical requirements. Some of the components of this Westinghouse electrical system are shown in the accompanying illustrations.

(continued)

J-94113-3

YOU CAN BE SURE...IF IT'S
Westinghouse



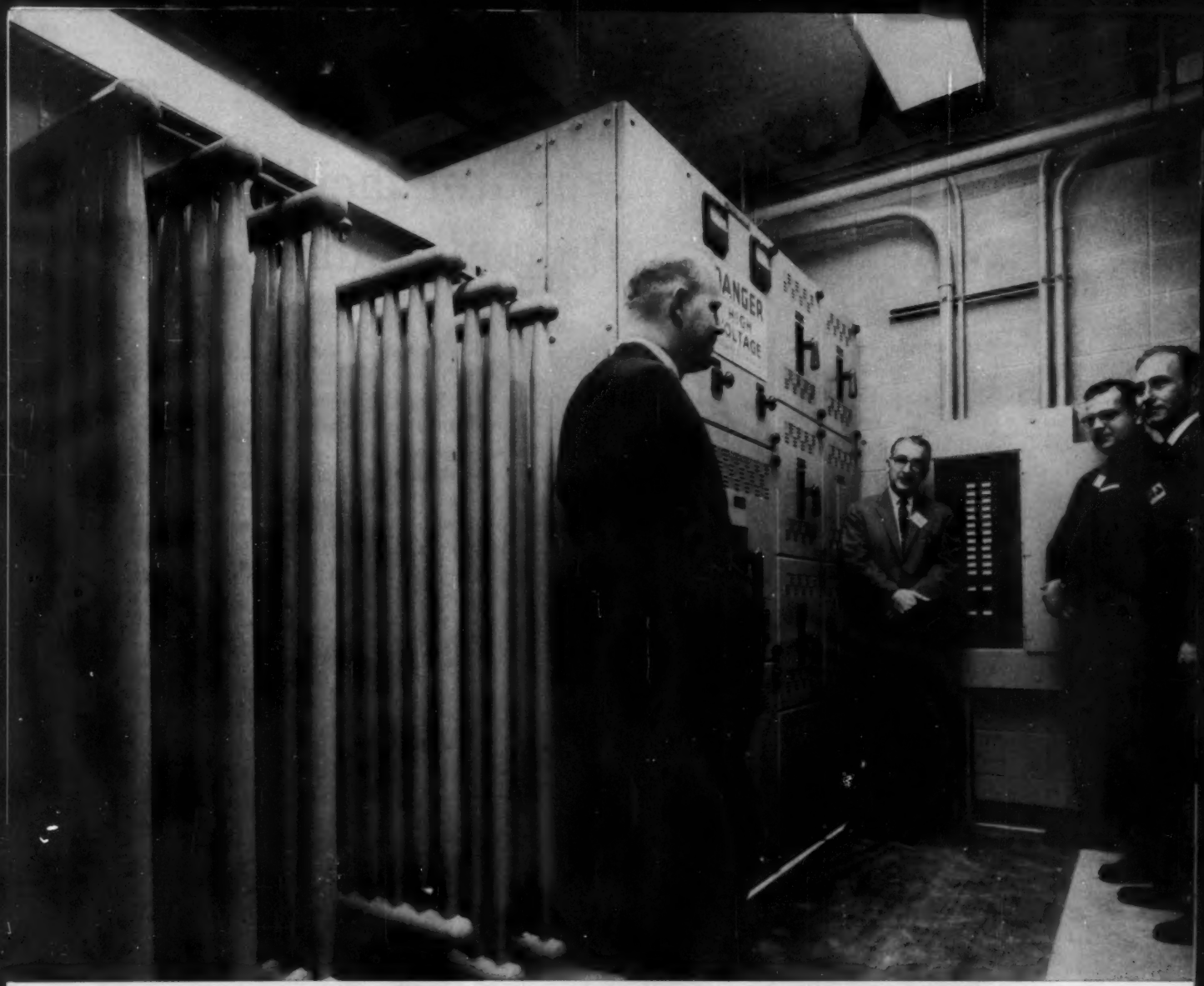
Robert Lichtenthal, James A. Reil, Ferguson Electric Construction Co., Electrical Contractors, and Charles Hansen discuss quietness and space-saving features which permit installation of Westinghouse 225-kva DT-3 dry-type transformer near office machines to which it supplies 120-v power.



Raymond E. Carroll, General Supervisor, Bell Electronic Data Processing, Charles G. Jones, Charles Hansen and George Dick Smith, Jr., examine the 150-kva Westinghouse power center supplying low-voltage power exclusively for computer equipment.



James Reil and Robert Lichtenthal check one of the two Westinghouse CDP panelboards which distribute 120 volts to the office machines from the Westinghouse 225-kva DT-3 dry-type transformer.



Charles Hansen, George Dick Smith, Jr., Charles G. Jones and Raymond E. Carroll discuss Westinghouse 500-kva building service power center. CDP panelboard is shown on wall at rear.

Bell Aircraft computer facility required unusual plant planning *(continued)*

Westinghouse welcomes the opportunity to work with you in determining the best solutions to your own special electrical requirements. See the Westinghouse Electrical Construction Engineer nearest you, or write Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pa.

Electronic Data Section
Bell Aircraft Corporation, Buffalo, New York
Architect: Kideney, Smith & Fitzgerald, Architects and Engineers
Consulting Engineer: Walter H. Sherry and Associates
Electrical Contractor: Ferguson Electric Construction Company, Inc.
Westinghouse Distributor: Buffalo Electric Co., Inc.

J-94113-4

YOU CAN BE SURE... IF IT'S Westinghouse

Over 275 Pages Westinghouse Data in Sweet's Architectural File (S)

General view shows one section of electronic data computer room at Bell Aircraft.



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School Construction





$7.69 per square foot complete

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For the past quarter century, Unit Structures, Inc. has pioneered in the continuing development of functional, fire resistive schools through the use of soundly engineered, permanent glued laminated wood members.

The use of clear spanning laminated arches and beams was a major factor in the low, low cost of $7.69 per sq. ft. achieved in the construction of the Westminster High School. The 5″ x 13″ classroom roof beams span 57′ - 3″ over two classrooms and the middle corridor and bear on 5″ x 8⅛″ glued laminated exterior wall columns. The simple beam-to-column connection and the single element construction effected considerable erection savings, according to the Triangle Construction Co., General Contractors, Greenville, S. C.

The 7″ thick Southern Pine arches, shown in the gymnasium, are spaced 17′ - 2″ on center. The arch depth was tapered from 15″ at the crown to 24″ at the base, thereby economically utilizing the lumber in accordance with the structural requirements.

A continuous skylight was readily achieved by simple framing between the laminated wood purlins.



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ARCHITECT — HAROLD WOODWARD, SPARTANBURG, SO. CAROLINA

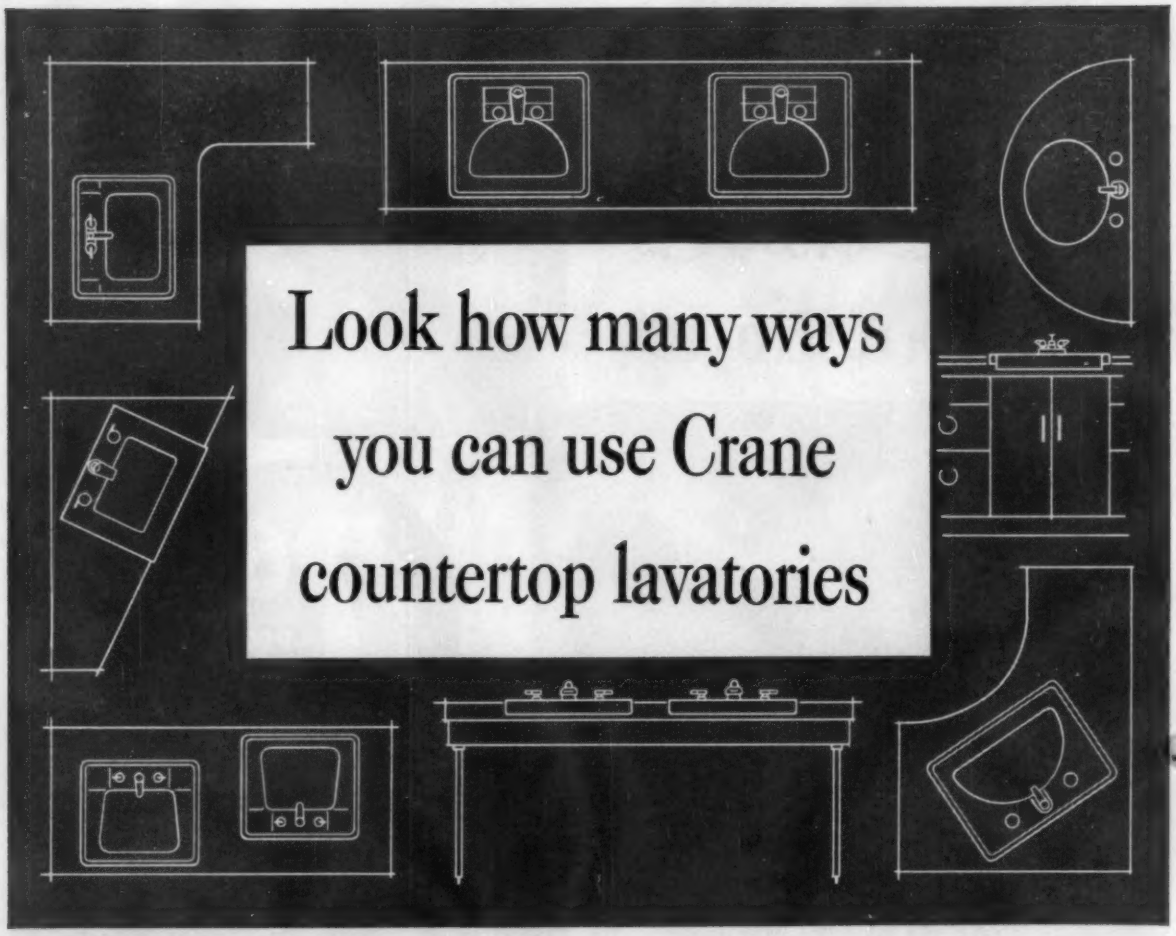
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UNIT STRUCTURES, Inc.

GENERAL OFFICES: PESHTIGO, WISCONSIN

PLANTS — Peshtigo, Wisconsin and Magnolia, Arkansas
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Look how many ways you can use Crane countertop lavatories





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Crane's larger selection of styles and colors gives you more ways to express your own ideas in bathroom design.

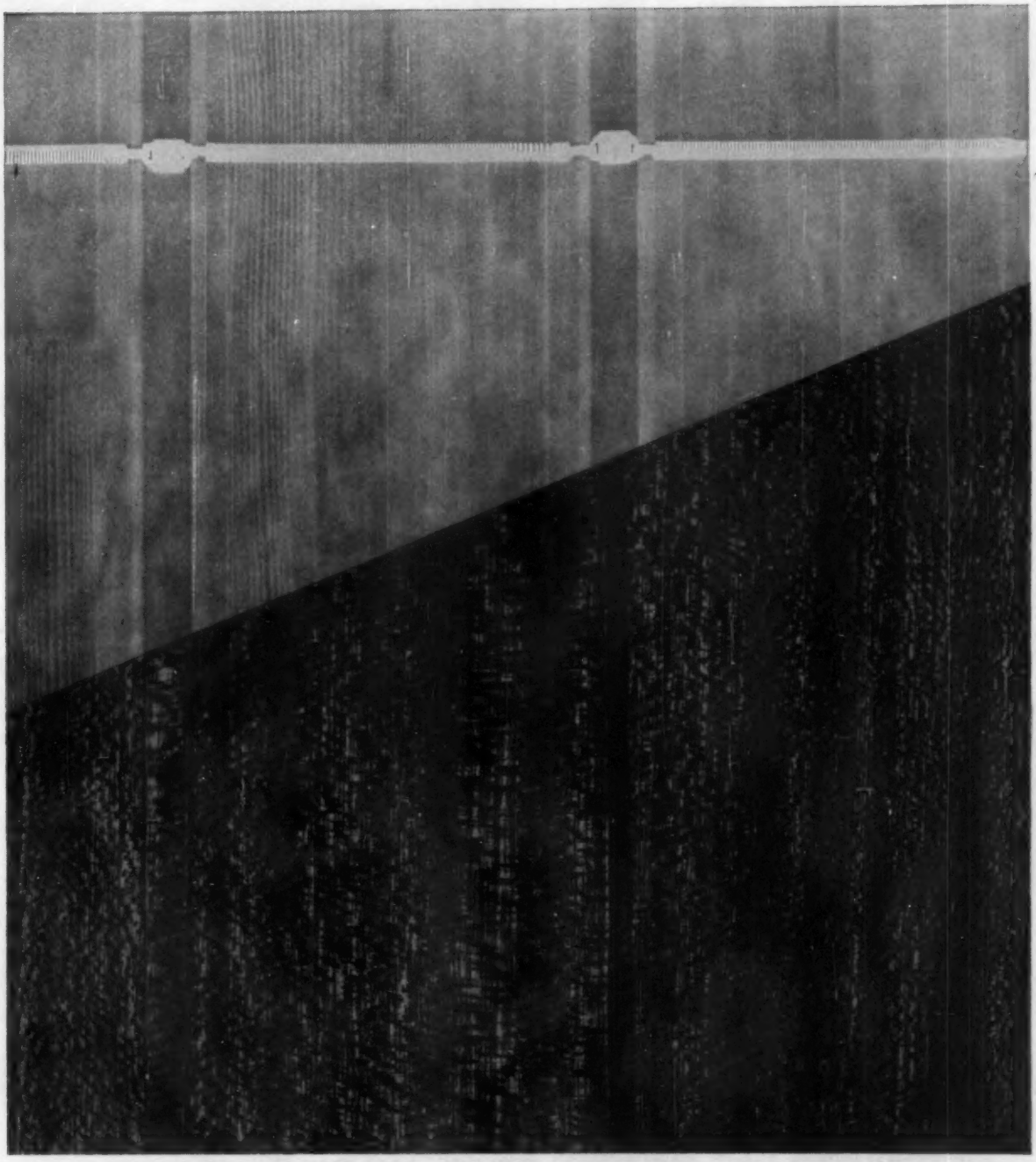
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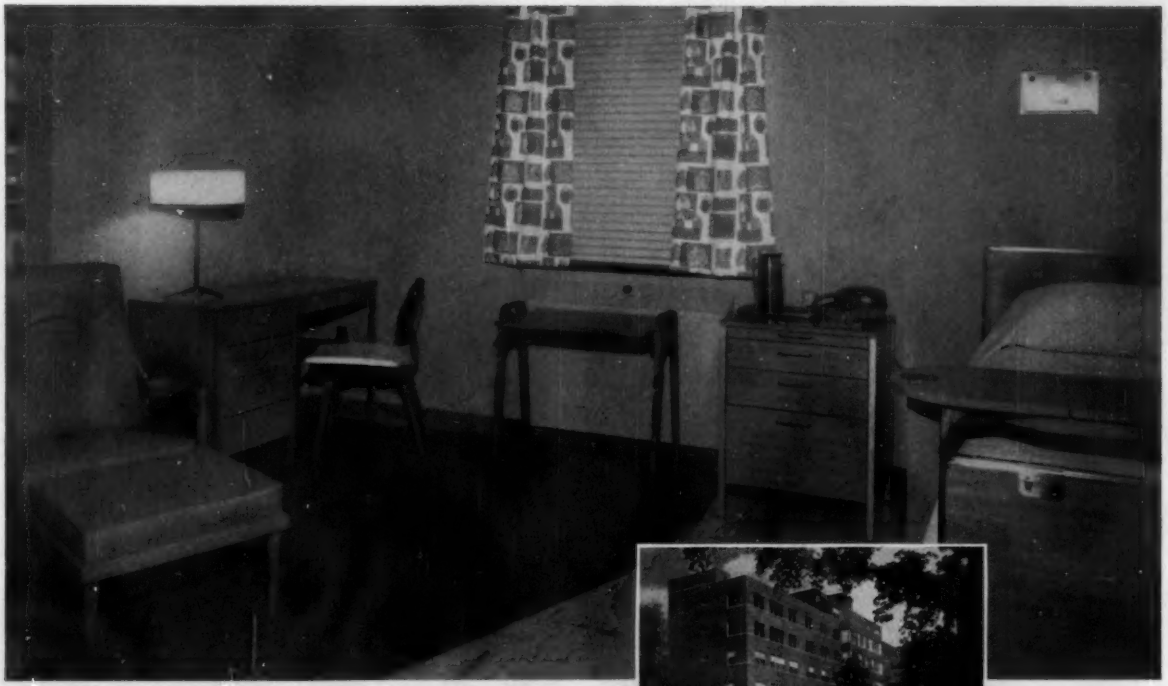
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Patient's room, Genesee Hospital, Rochester, N. Y. Interior design by Hospital Furniture, Inc. Colin Campbell McLean, Pres.



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WOOD CASEMENT WINDOWS

ROLSCREEN COMPANY,
Dept. J-93, Pella, Iowa

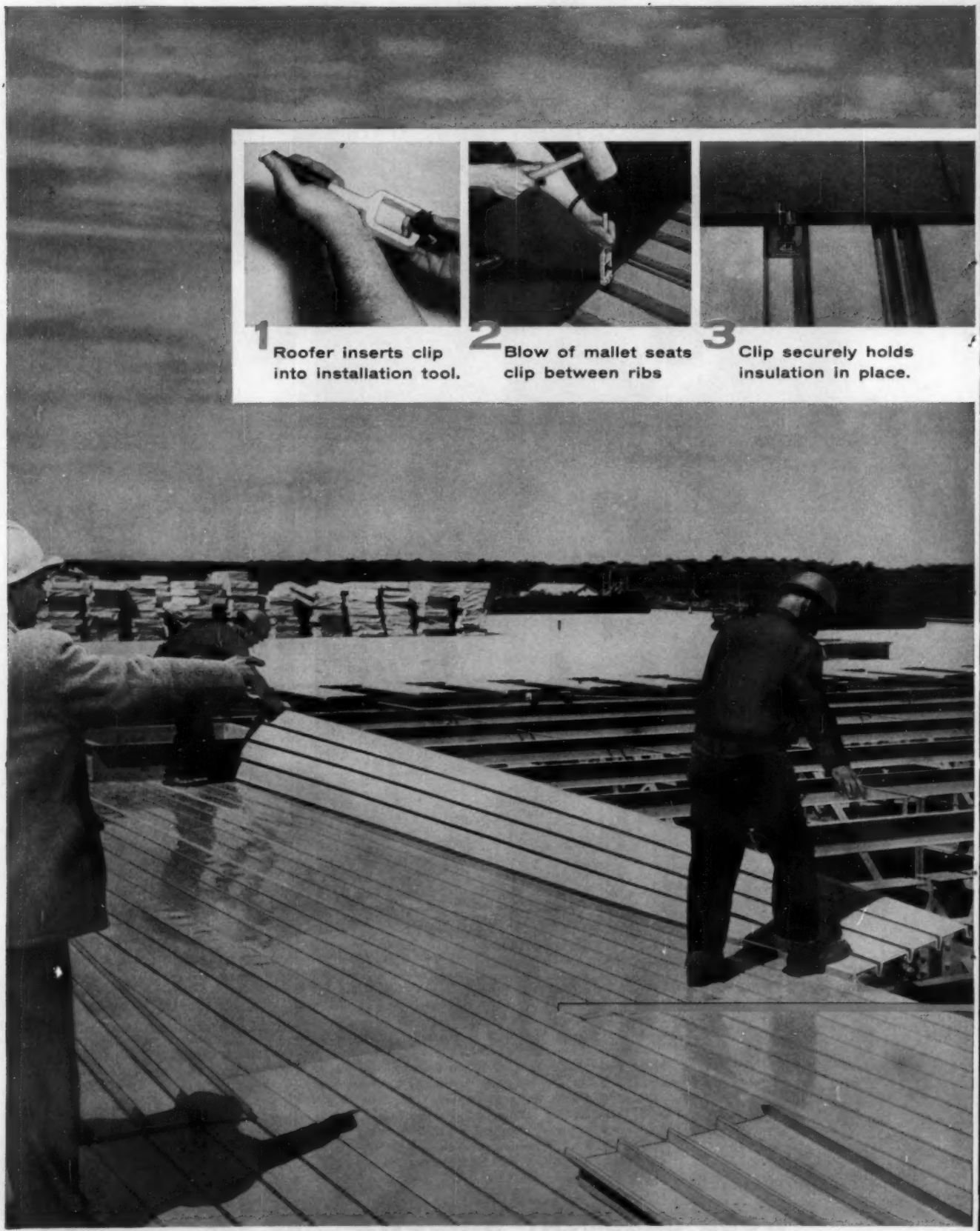
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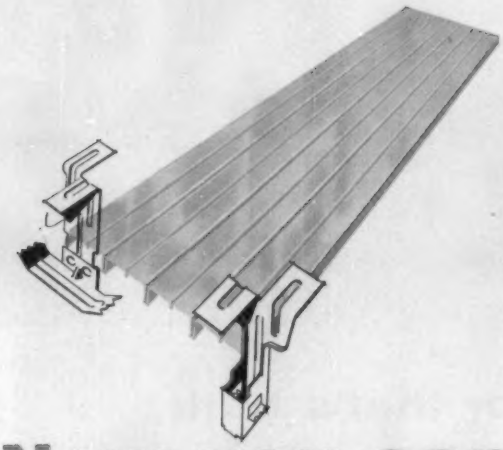
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So now you can add greater fire protection to these other advantages of Milcor Steel Deck: (1) Exclusive Bonderized, baked-enamel primer that cuts field painting costs in half; (2) Speed of erection in any weather; (3) Savings on size and cost of structural members.

Write for samples of the clip made to our specifications by the Geo. A. Tinnerman Corp. And see Sweet's, section 2f/In L — or write for catalog 240.

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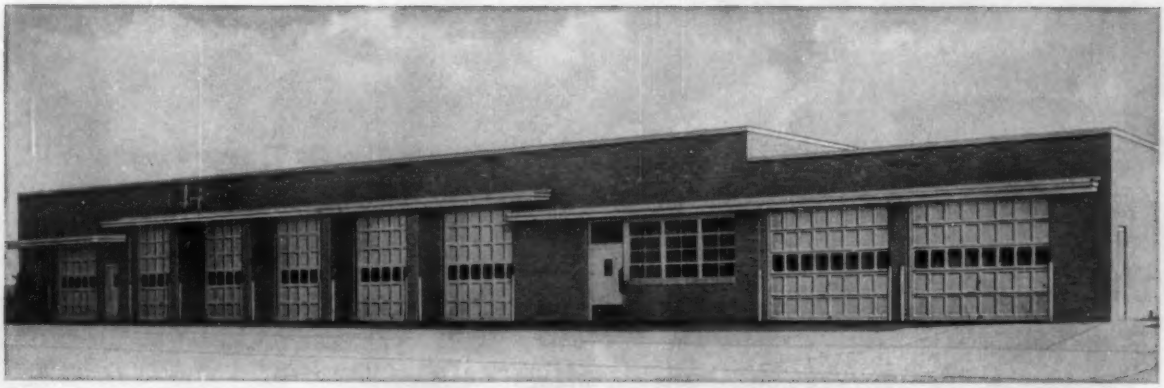
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Outwardly, one overhead type door looks much like another. But when you get down to cases, check actual dimensions of millwork and hardware, examine construction details, and consider special features, you discover big differences.

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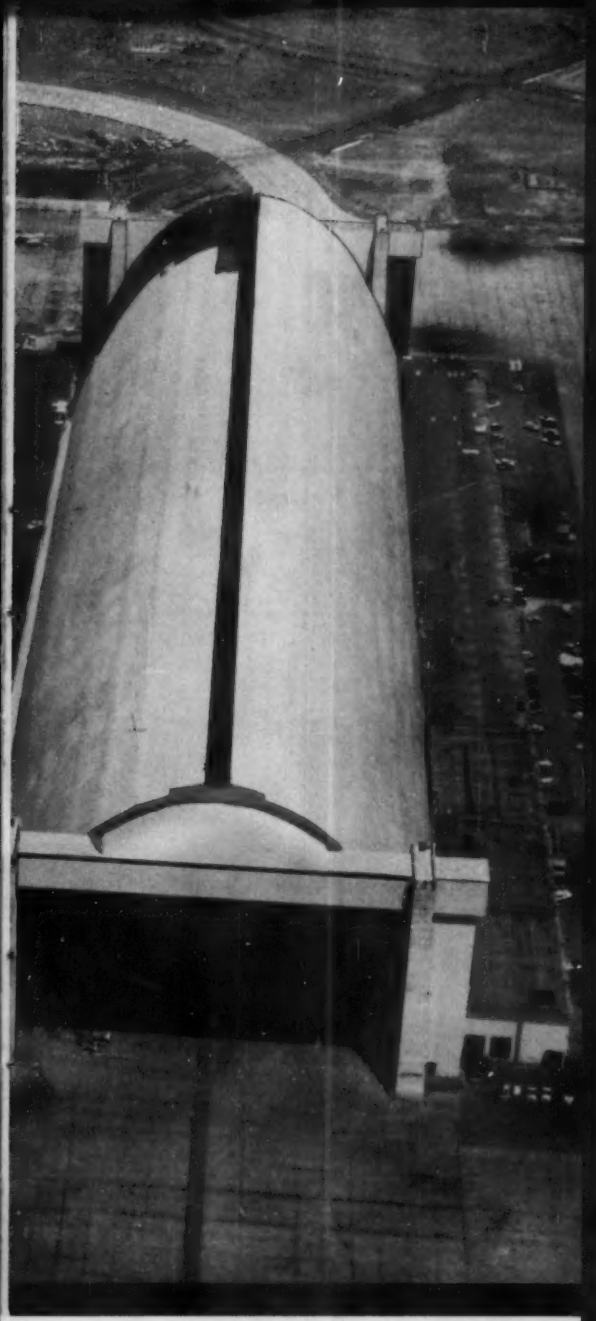
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A KAISER ALUMINUM ROOFING AND SIDING SHEET FOR EVERY INDUSTRIAL NEED

These roofing and siding sheets are available in a selection of thicknesses, finishes, widths, lengths. Flashing sheet, pre-formed flashing, closure strips and other accessories also available. For full information, see Sweet's 1958 Architectural File 8h/Ka or Industrial Construction File 4h/Ka. Complete specifications provided on request.







Aircraft hangars. U. S. Naval Air Station, Moffett Field, California. Re-roofing of hangar at left commences as work on hangar at right nears completion. Consulting Engineers: Waters, Ruth and Going, San Jose, Calif.; Contractor: Dale Benz, Inc., Phoenix, Arizona.

Workmen easily apply corrugated Kaiser Aluminum over built-up roofing. Aluminum's light weight made the job go fast.

16-ACRE OVERHEAD PROBLEM SOLVED!

Two huge Navy hangars get a sturdy re-roofing with lightweight sheets of low-maintenance Kaiser Aluminum

At Moffett Field, California, leaky roofs were threatening the structural wood framework of two giant Navy hangars with rot and deterioration. Repairs were constant and costly. A new covering was obviously needed.

Why did consulting engineers Waters, Ruth and Going specify aluminum for the job? Because careful studies pointed up these important advantages:

1. Aluminum is so *light in weight* that there would be no need to re-stress the buildings.
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Quick to apply — Here's what contractor Dale Benz reports on the project: "Using extra wide 45⅝" sheets of 0.032" thick Kaiser Aluminum stucco-embossed industrial corrugated roofing, 16 of our men were able to place between 400 and 500 sheets every day.

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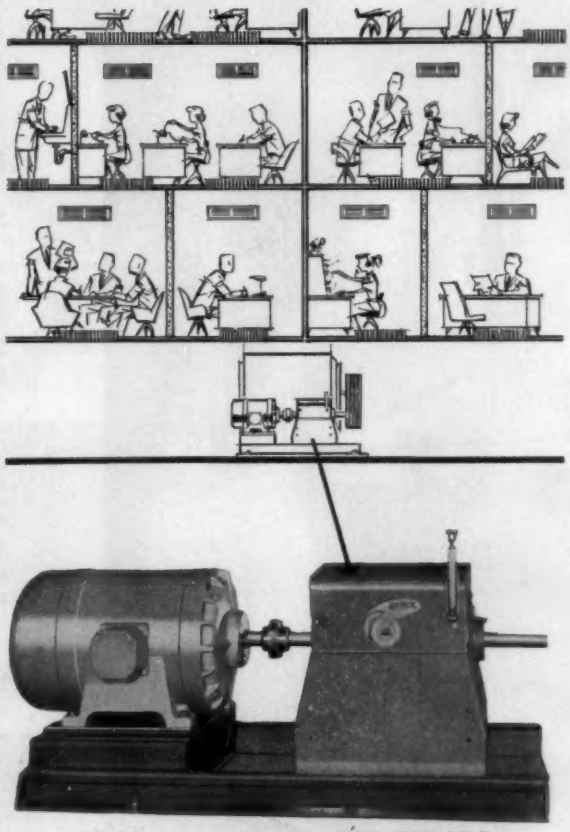
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Gýrol® Fluid Drive lets you...

REDUCE FAN NOISE...

improve control . . . save power!



MOTOR GÝROL FLUID DRIVE

USED with a constant speed motor, an American Blower adjustable speed Gýrol Fluid Drive reduces fan speed to match demand. Reduced speeds result in reduced noise levels.

Stable control over the entire operating range is readily obtainable with Fluid Drive on single or parallel fan installations.

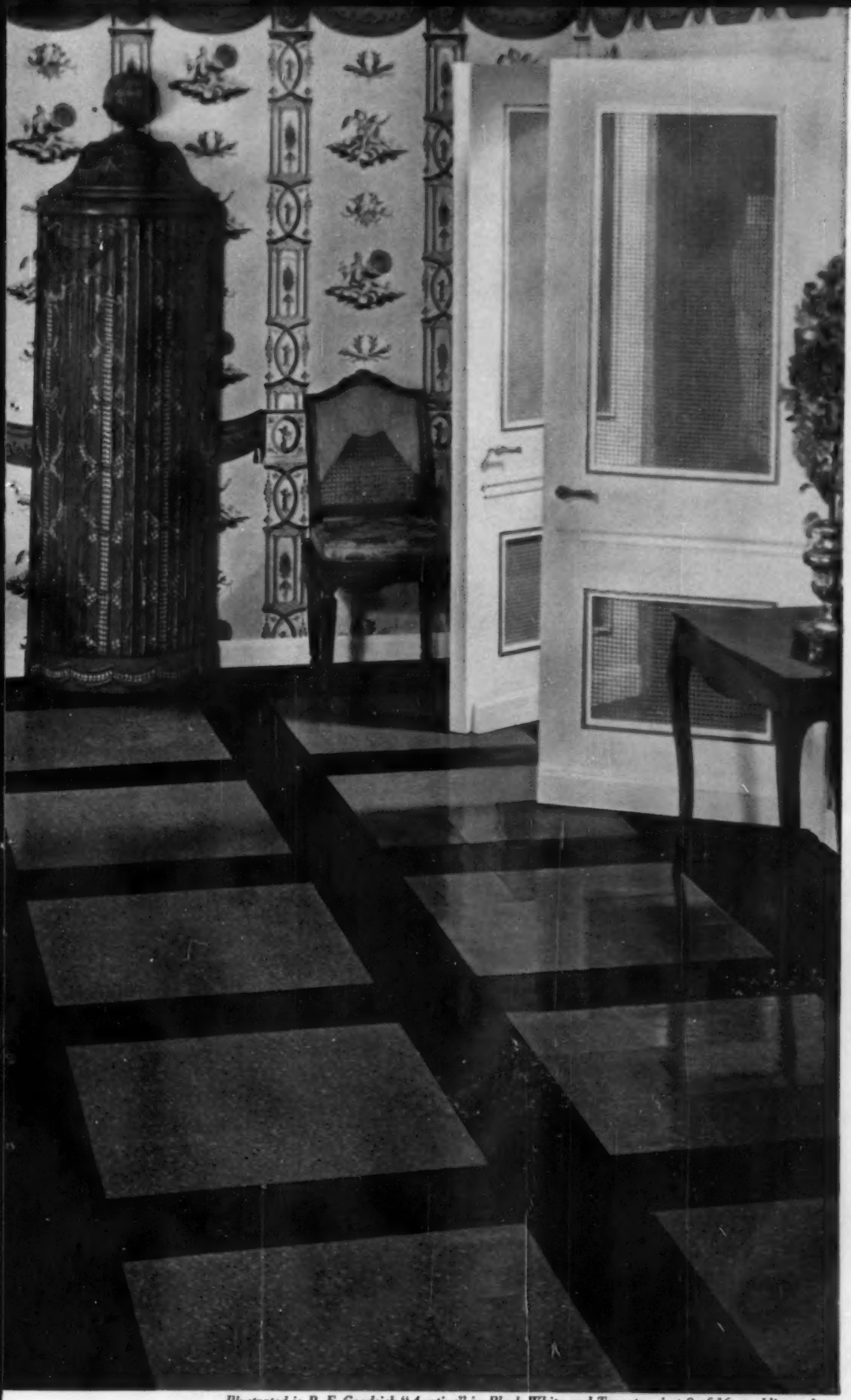
Bonus: Adjustable speed results in reduced power consumption. All of these benefits can often be obtained with little or no increase in initial cost.

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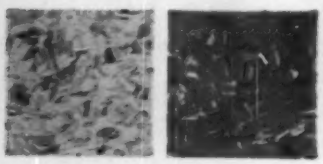


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FLOOR TILE

(MADE WITH VINYL)

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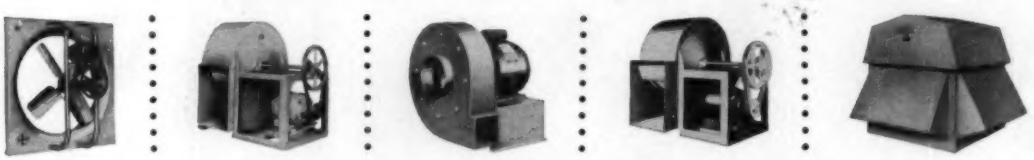
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Write Today for Bulletins SDA-220, SDA-200 and SDA-160.

there's *EXTRA* safety

when the RIXSON *automatic* opens and closes the door

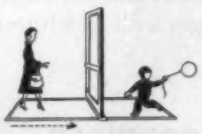


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Two-inch trim and two-inch transom bars.

Exclusive mullion clip attachment for standard, simplified assembly in the field.

Frames prepared for either mortise cylinder locksets (government 86) or cylindrical locksets (government 161).

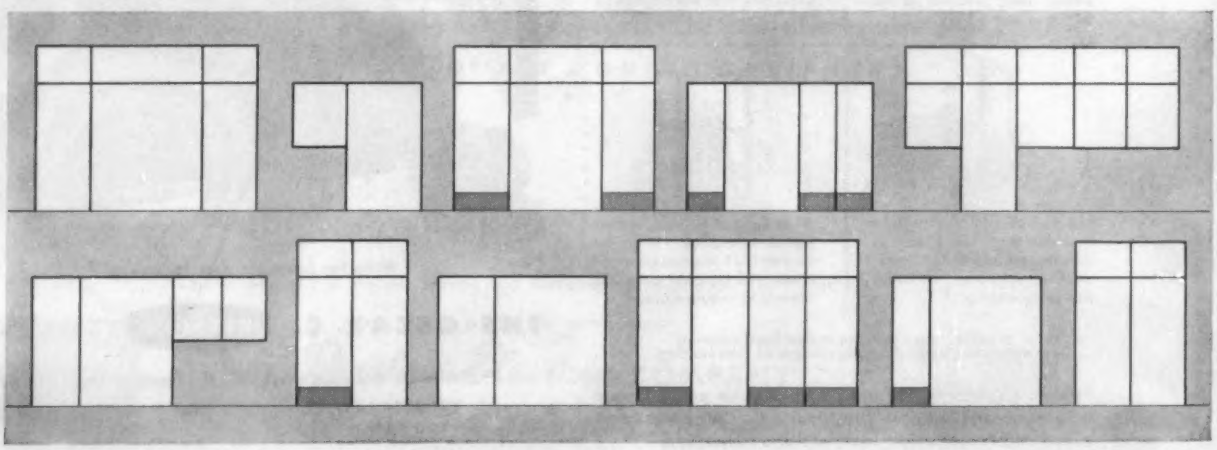
5½" jambs.

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AETNAPAK DOORS AND FRAMES

AETNAPAK offers completely flush design in both swing and sliding doors. Your choice of hinges, push plates, closers, push bars, panic devices and other accessories. Order CUSTOM-STANDARD AETNAPAK door-frame packages with or without hardware; doors separately or frames separately.

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IN STOCK, READY FOR DELIVERY

REMEMBER, all components of custom-standard AETNAPAK doors, door frames, borrowed lights, transoms, side lights and smoke screens are held in stock under inventory control—which means that everything you order in the AETNAPAK line is available for immediate delivery!

avoid engineering delay.

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Please send free catalog of AETNAPAK custom-quality, always-in-stock steel doors, frames and hardware. ☐

Name..... Title.....

Company name.....

City..... State.....



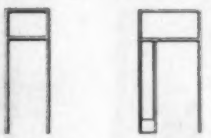
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... the quality of custom construction
... the freedom of custom design
combined with "stock" economy and fast delivery

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- **frames**
- **unit entrances**



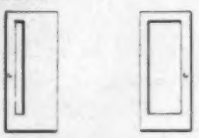
FST 3070 LH UET RH

- **sidelights**



2SLT 3070 SLT 3070 SL 3070

- **doors**



FVV 3470 RH GI 3070 LH

pre-engineered

doors . . .
. . . eighteen standard elevations, in eight basic widths, 6'8" and 7'0" heights. Flush design without visible seams or joints.

frames . . .
. . . twelve widths (2'0" to 6'8"), 6'8" or 7'0" heights.

unit entrances . . .
. . . 3'4" door opening width, 1'0½" adjoining sidelight, 7'0" height. Also available with 2'0" transom.

sidelights . . .
. . . twelve widths, 6'8" or 7'0" heights. Also available with 2'0" transoms and/or horizontal divider.

borrowed lights . . .
. . . one hundred combinations of widths and heights.

hardware . . .
. . . nationally available "off the shelf" if the advantages of local hardware service are desired. However, complete package units (doors, frames, hardware) can be ordered from Superior Standardline.

SUPERIOR STANDARDLINE CORP.
4175 Park Avenue
New York 57, New York



Art Hupy

Recent Work of

ANSHEN & ALLEN



1949: House for Mrs. Sonya Silverstone, Taxco

The range of Anshen and Allen's work in the 18 years of their partnership has been wide. But its reach has been deep as well. In the design of tracts and tract houses they have been pace-setters; their Chapel of the Holy Cross makes clear that strong religious architecture and contemporary expression need not be strangers to each other; their residential work, from the house for Mrs. Sonya Silverstone near Taxco to passenger quarters on trans-ocean ships, has been a consistent progression.

Their current work extends this range in several directions: a significant building in the Mission 66 program of National Park Service; a teaching and research building for a university; a skyscraper for downtown San Francisco; and the hotel accommodations for a new trans-Pacific passenger liner.

In the design of these projects, as in their predecessors', certain characteristics are clear: the response to the potentials, latent as well as obvious, of the site; a particular propensity for integrating the designed environment with the natural environment; and for capitalizing on what might seem to be disadvantages of site or restrictions of program. The limitations of the job are, they say, "our greatest opportunities."

Anshen and Allen's approach to architecture, neither wholly romantic nor completely intellectual, concerns itself with the logi-



1952: Fairmeadows Tract for Joseph Eichler, Palo Alto



VISITOR CENTER, DINOSAUR NATIONAL MONUMENT

Vernal, Utah

cal use of materials; with the expression of structure in architecture; but, more importantly, with the enrichment of surface in the very vocabulary of function. Thus the light and shade on the surface of the Chemistry building at the University of California will come from balconies which are an architectural means of meeting a practical necessity in such a building in such a location; nor will the building's columns be an expression of structure only but of function as well. The ramps at the Chapel and at Dinosaur are a practical means of rising from one level to another; but the sinuous line is an enrichment of the architecture even while it interferes least with the natural surroundings. The space frame design for an office building carried this idea further, to a point where architectural concept, structure and surface texture became one completely integrated solution. Although this particular design will not be built (because of basic changes in conditions of the project), the solution is a valid one which perhaps someday may be erected.

Collegemates at the University of Pennsylvania, partners since they opened their office in San Francisco in 1940, S. Robert Anshen and William Stephen Allen work together without specialization or division of responsibility. Their work in several fields has received numerous national and local architectural awards.



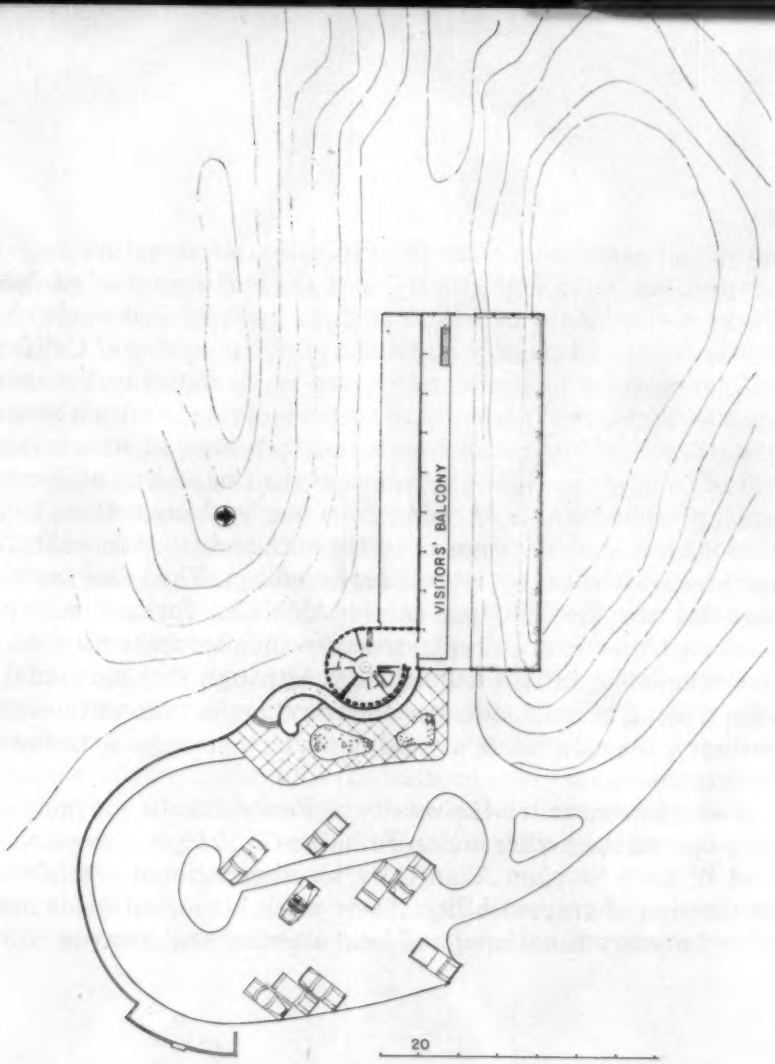
1956: Chapel of the Holy Cross, Sedona, Ariz.

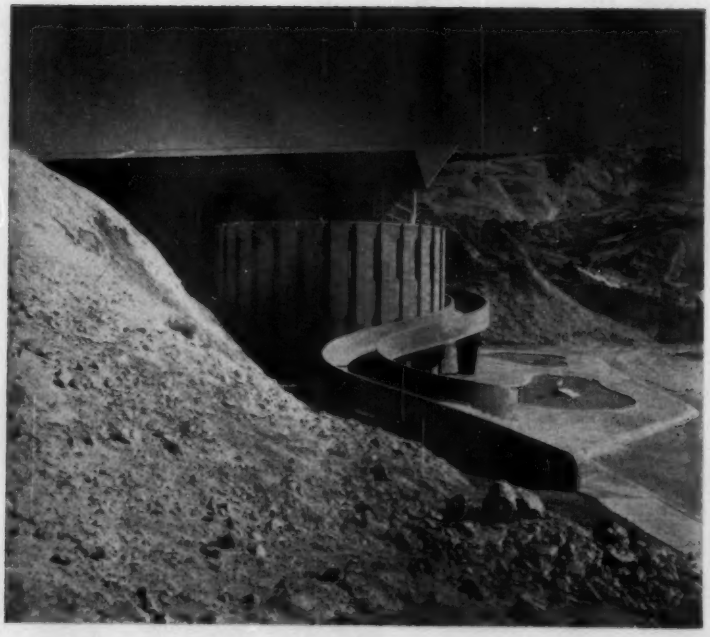


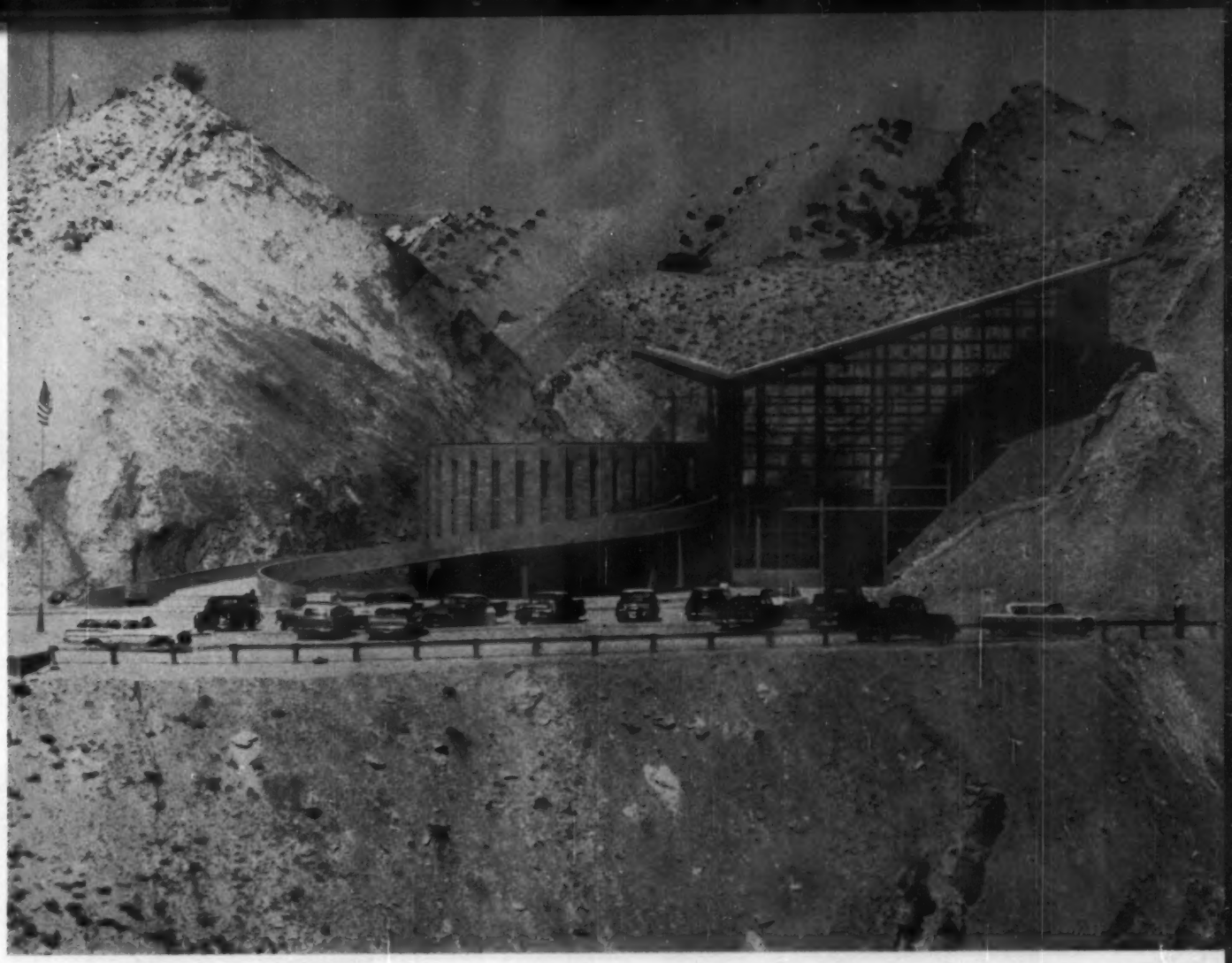
Anshen & Allen



Art Hupy







Visitor Center, Dinosaur National Monument

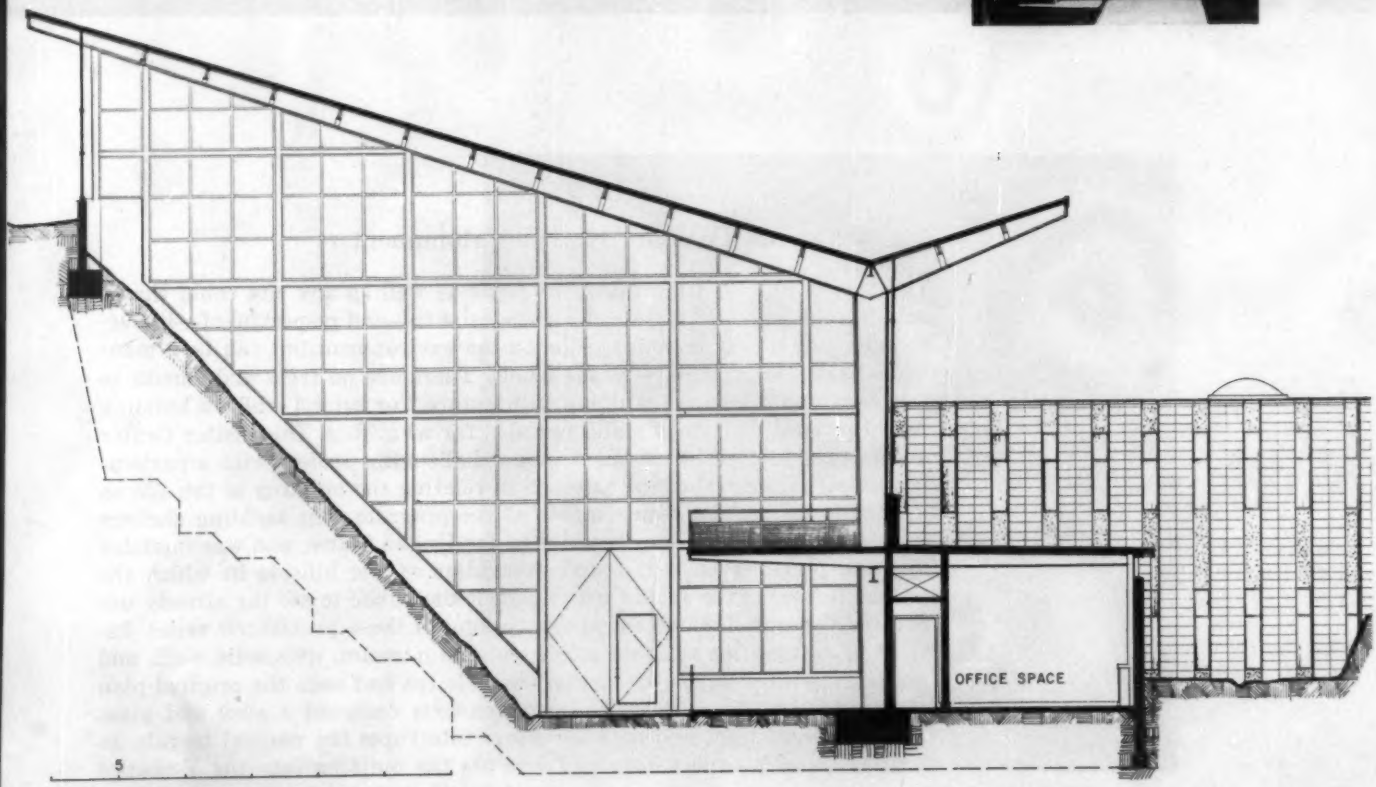
The barren hills of Utah make the point as well as any site could that a building expressive of its purpose, responsive to—and respectful of—its surroundings, not only is no intrusion on the environment but can be a man-made part complementary to the whole. There are no trees and shrubs in this region to "blend the building with nature," or behind which a building can be concealed; it must stand revealed for what it is. The Visitor Center at Dinosaur National Monument was a challenging project with a particular appeal to the architects, as much in relating the building to the site as in solving the special requirements of the program. The building shelters the largest find of dinosaur remains in the United States, and was intended to make possible the year-round excavation of the hillside in which the fossils lie, and at the same time to permit the public to see the already uncovered bones and watch the slow exposing of these prehistoric relics. Instead of making the building a conventional museum, with solid walls and artificial lighting on the "in-action" exhibit (as had been the original plan of the National Park Service), the architects designed a steel and glass pavilion whose light and open structure interrupts the natural terrain as little as possible, and whose roof line fits the building into the V-shaped

Anshen & Allen

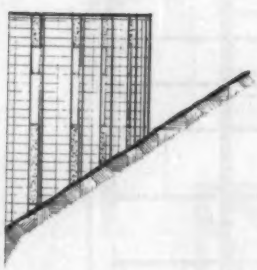


Art Hupy



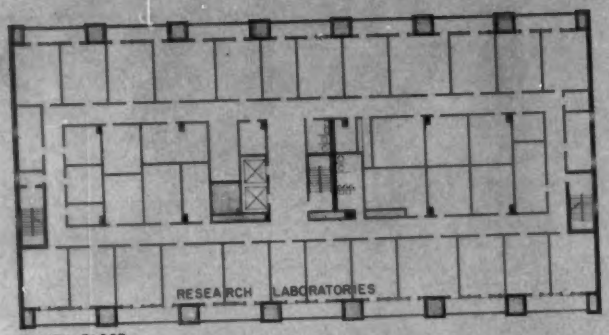




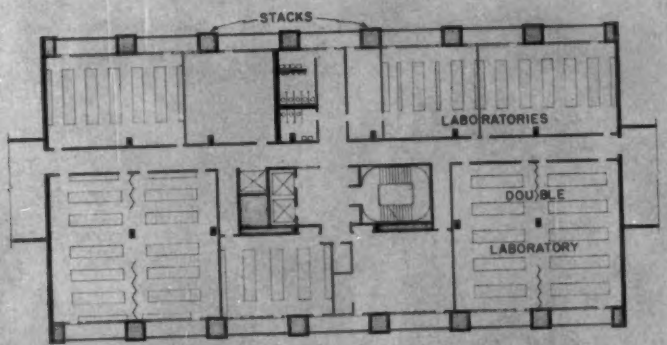


declivity which is its site. Daylight enters from all sides of the enclosure, further integrating the natural surroundings with the building. While the work of excavation is under way on the cut in the hillside, visitors can watch from an overhanging balcony which runs the length of the building. A curved ramp leads gradually from the parking area to the balcony level, first taking the visitor through a lobby in the circular building beside the pavilion.

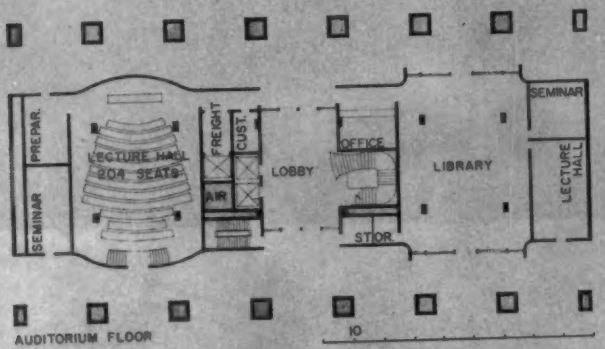
Within the Mission 66 program of N.P.S., of which this building is a part, the Visitor Center at Dinosaur is significant as good architecture and as an imaginative solution of the parks' building needs which might well set the standard for other buildings in the program. The enthusiastic response to the building by the thousands of visitors who have already seen it is strong vindication of the hearty support given Anshen and Allen's design by the Western office of the Design and Construction Section, N.P.S., and the contribution made by the architects themselves (after receiving the commission) in revising the Park Service's original design. *Robert Dewell, Structural Engineer; Earl & Gropp, Mechanical and Electrical Engineers; R. K. McCullough Construction Co., General Contractors.*



EIGHTH FLOOR

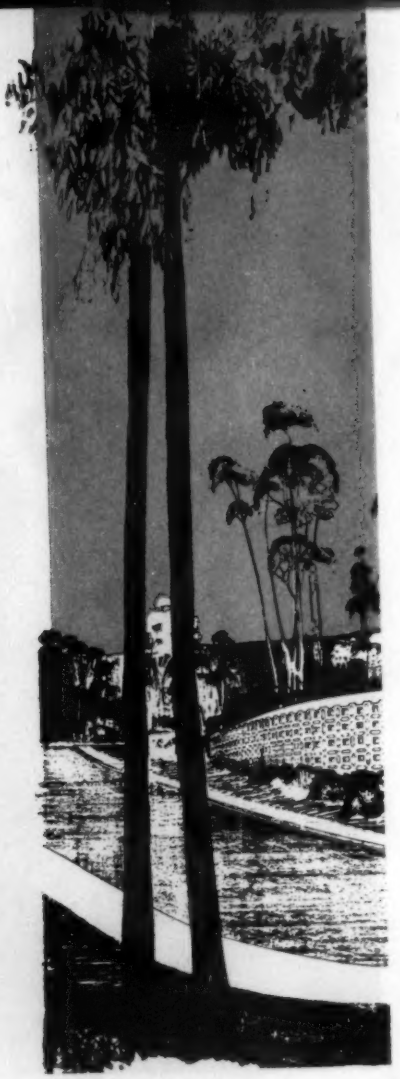


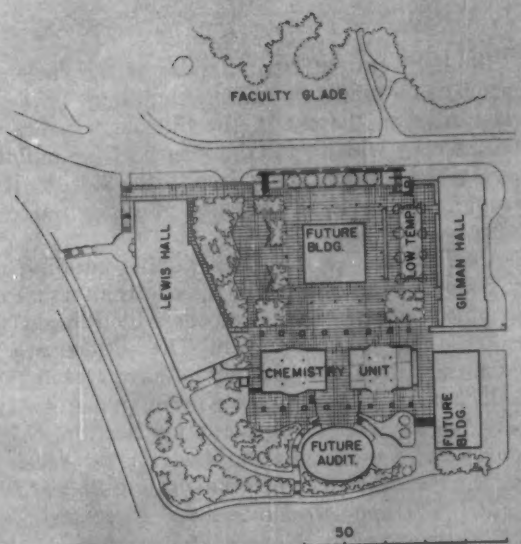
THIRD FLOOR



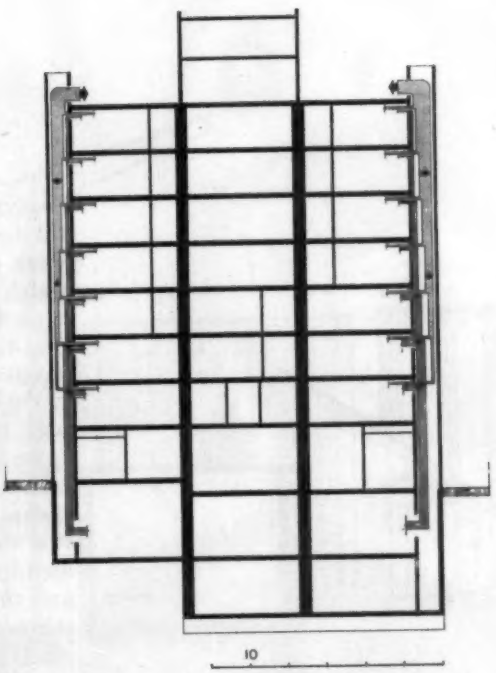
AUDITORIUM FLOOR

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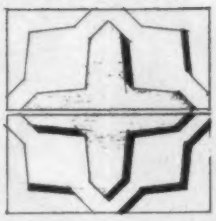
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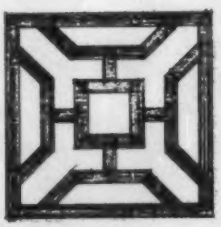


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CHEMISTRY BUILDING, UNIT 1 *University of California, Berkeley*



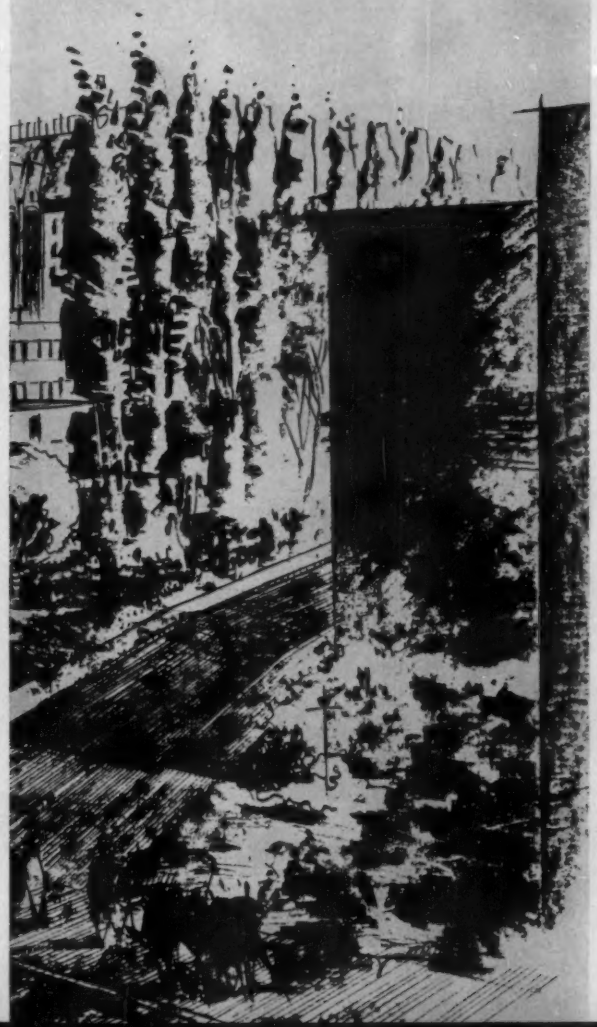


First of several new units to be built in the chemistry area of the Berkeley campus, this building is for both teaching and research. Because its site is between two existing buildings, a certain harmony with them was essential, particularly as they form a permanent part of the chemistry area and the new building is to be physically linked with one of them by a bridge. The requirement of fitting the building to a man-made environment as well as to the conditions of the terrain (which include proximity to an earthquake fault) without stepping into the past as represented by the existing buildings was met with an essentially simple building in whose architectural expression functional and structural requirements play a prime part. The vents for such a building are often complex and frequently unsightly; here they have been integrated with the structural columns so that ducts from laboratories join the column-shafts on each floor and fumes are taken directly to the roof. Since the column-shafts are outside the actual building line, they must be stabilized; hence the extension of floor slabs between columns. The "balcony" thus formed also serves as an escape from labs in case of explosion and as means of access to vent shafts. *Robert Dewell and John J. Gould and Henry Degenkolb, structural engineers; Bayha, Weir and Finato, mechanical engineers.*


PARKIN

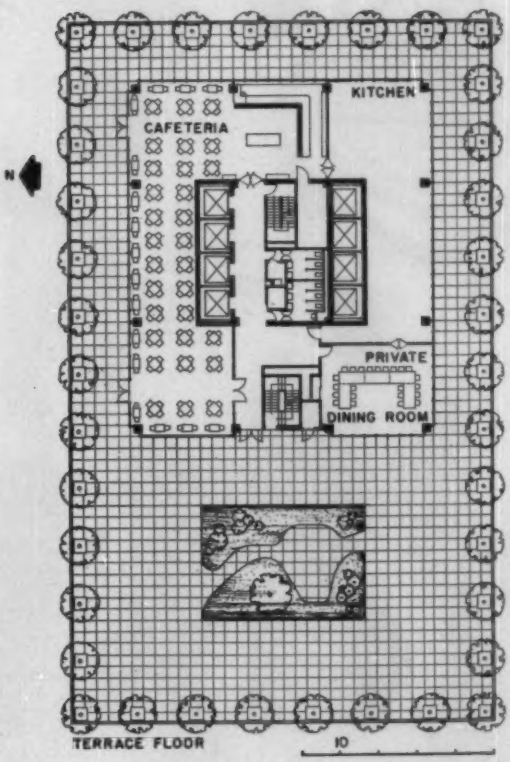


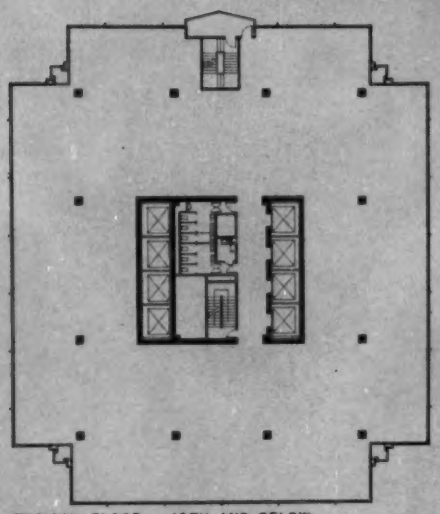
First solution—space frame 22 stories high with hexagonal windows resulting from stress pattern—was set aside when program conditions changed



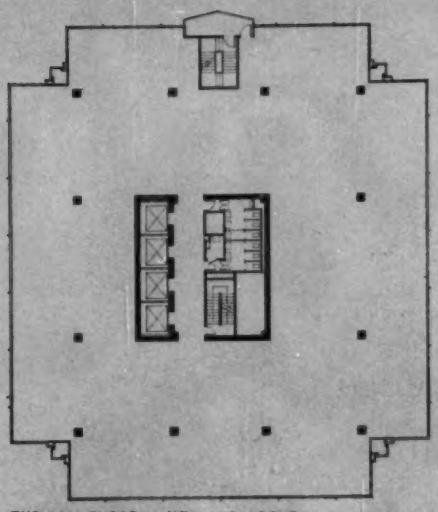
AMERICAN PRESIDENT LINES OFFICE BUILDING

San Francisco, California

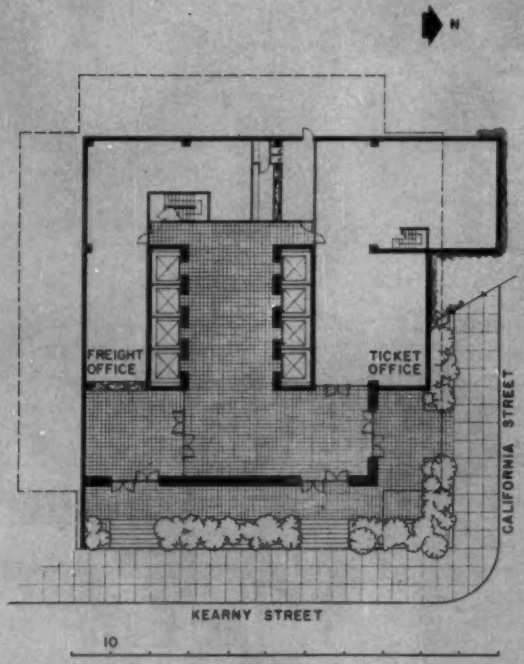


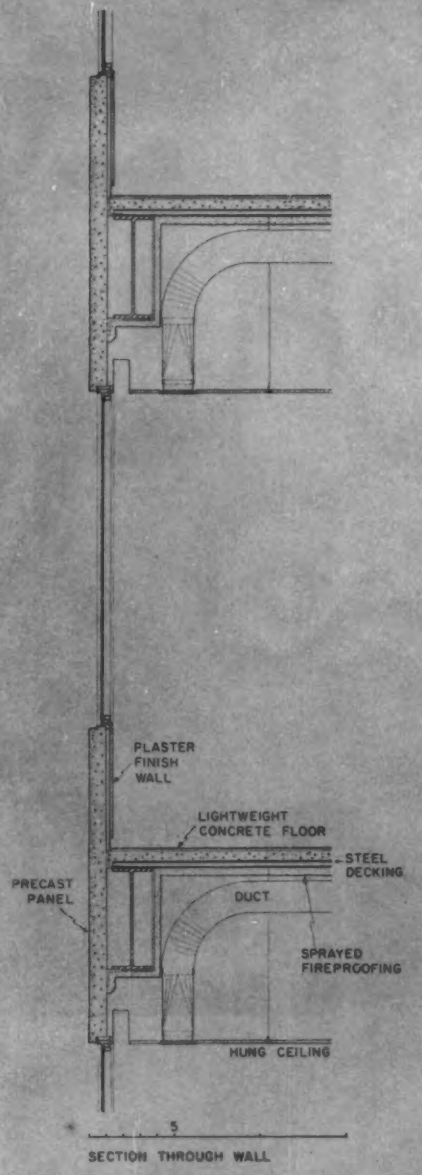


TYPICAL FLOOR — 10TH AND BELOW

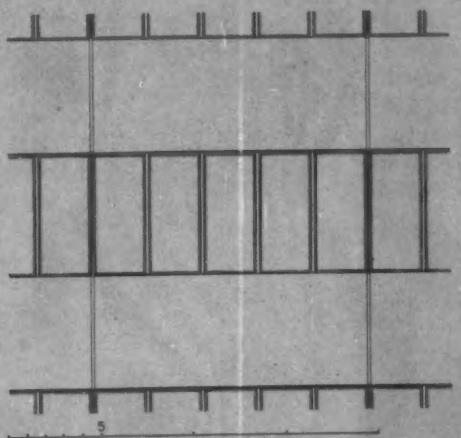


TYPICAL FLOOR — 11TH AND ABOVE



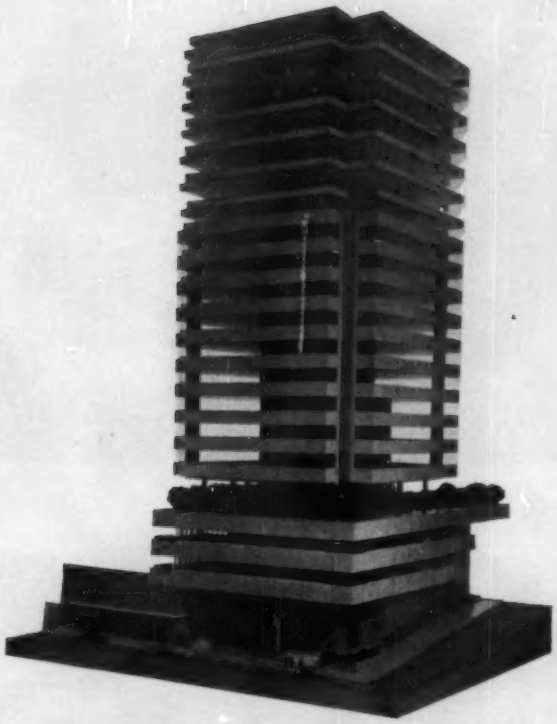


SECTION THROUGH WALL



ELEVATION DETAIL OF SPANDREL AND SASH

Anshen & Allen

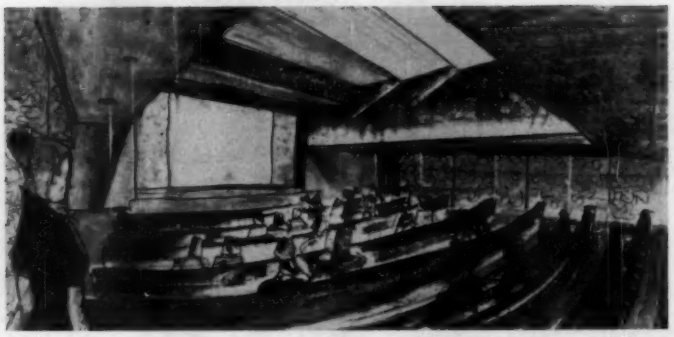


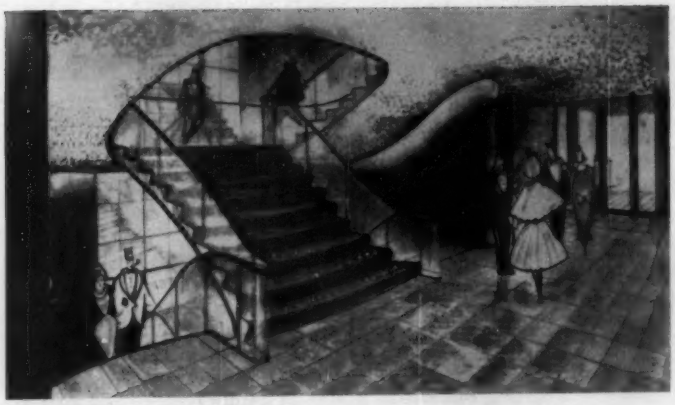
AMERICAN PRESIDENT LINES OFFICE BUILDING

Key to the design of this 22-story building for downtown San Francisco is the ownership of the air space that surrounds it. This makes it possible to cantilever the upper floors 15 ft beyond building line, considerably increasing the rentable floor area (to 85 per cent efficiency) and assuring light and air on all sides. The air, bought by the clients from the city, is "surplus city property" over St. Mary's Garage which adjoins the building on two sides. Besides the economic feasibility inherent in the design, the building as planned reflects a relationship between it and the city as a whole which recognizes that the tall building's responsibility extends up from the street as well as along it. The immediate neighborhood also benefits: at fourth floor level a park-like terrace surrounds the building enclosure and overhangs the garage's roof deck, continuing the welcome openness of St. Mary's Square which tops the garage. The building's walls are not typical curtain walls, although they carry no loads. The operable sash act as a filler between spandrel panels which are fixed at their centers to floor slabs. The three-foot module used gives a unique flexibility in office arrangement. ***John J. Gould and Henry J. Degenkolb and Robert Dewell, Structural Engineers; Eagleson Engineers (Charles Krieger, E.E.) Mechanical and Electrical Engineers.***

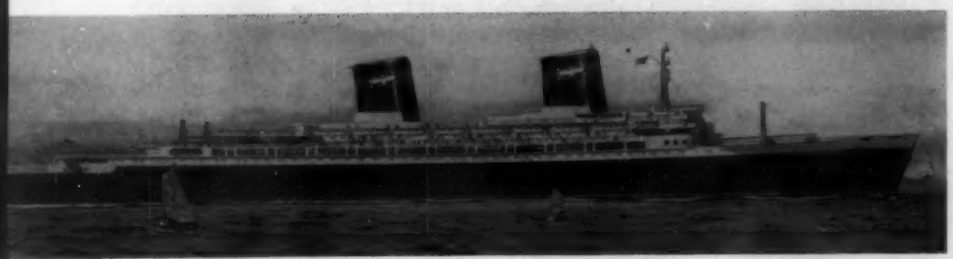
Anshen & Allen









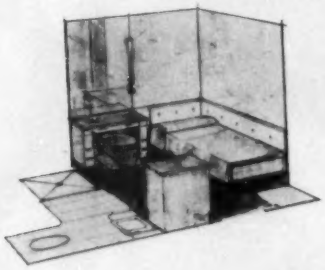


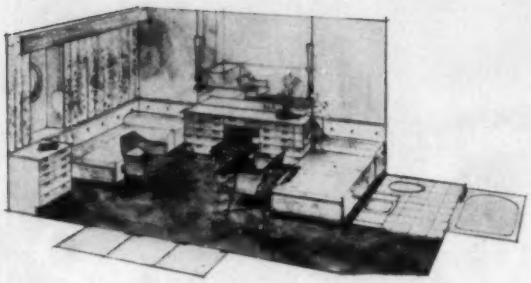


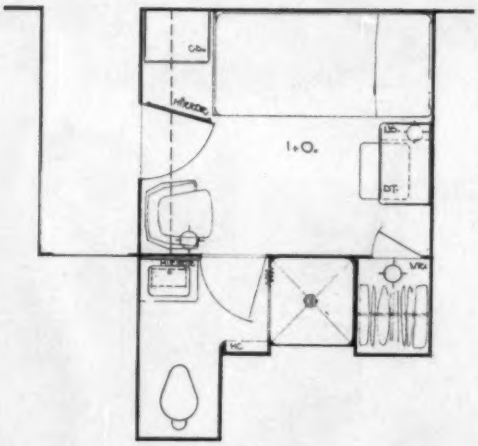
PASSENGER QUARTERS FOR S.S. *PRESIDENT WASHINGTO*

More like a hotel than a ship, the passenger quarters of the American President Lines' new 45,000-ton trans-Pacific liner were a challenge of an unusual sort, calling for particular ingenuity by the architects in designing within the strict limits of the space provided them by the naval architects. The intensive use of space which this dictates and the devices by which space needs and economic feasibility are brought into balance, may well have applications in other fields (hotels and office buildings, for instance) than ships. Although designing for ships was no new experience for the architects—they had already been architects for passenger quarters on two new freighters and redesigned those on eight other *President* ships for the same line—the President Washington was a much more extensive commission, involving the design of furnishings, selection of fabrics, and planning of all public spaces as well as of various sizes and types of cabins. It further offered the unusual opportunity to work with the naval architects in designing the hotel accommodations before the contract documents were made final. *Anshen & Allen, consulting architects for the hotel section; interior designers for one-half passenger accommodations; Eleanor LeMaire, interior designer for one-half passenger accommodations; Gibbs and Cox, naval architects.*

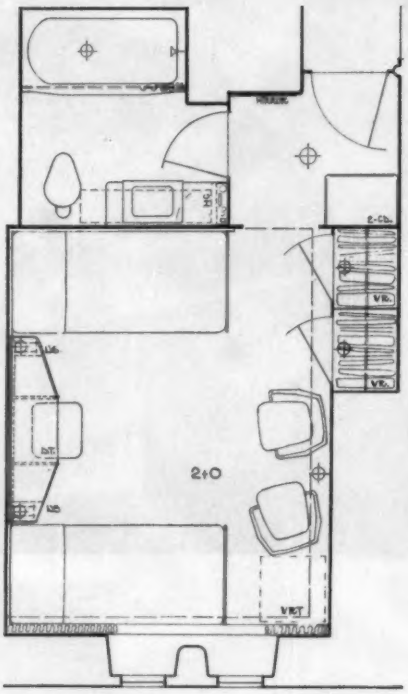
Anshen & Allen





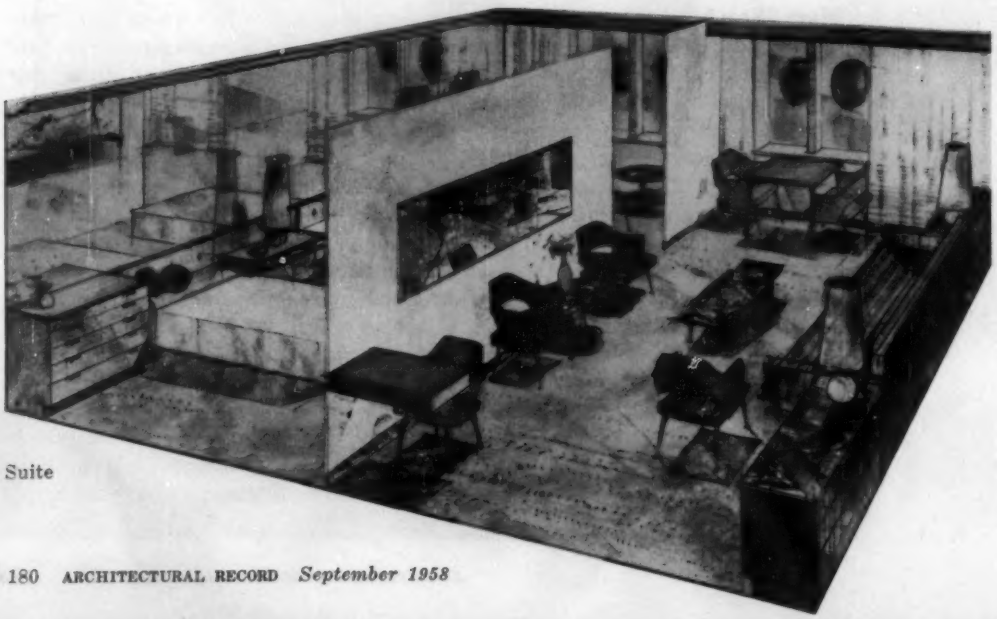


Single Cabin



Double Cabin

Passenger Quarters for S.S. *President Washington*



Suite

Commercial Parking Garages

A review of some of the factors important in the design of parking buildings
Based on information provided by The National Parking Association



Parking garage operators generally assign "architecture" to the outer six inches of their buildings. In this they are not, perhaps, unique. It may be said in mitigation that there are few enterprises that can be more quickly hurt by lack of attention to planning. The operators, as represented by their national organization, the National Parking Association, emphasize crucial planning considerations.

1. Does the building take into account the things that attract people to the surrounding area, the length of time that they stay, and the effect that the garage has on the area by its very existence?
2. Does the planned method of operation fit the structure designed for it, take into account the costs of personnel and machinery, and make best disposition of the prevailing type of parker?

Downtown parking garages deal generally with shoppers, commuters, and professional people with their varying demands. The garages are either operated by parking attendants or by the drivers themselves, though a growing number are mechanized. A good deal of the success or failure of the parking operation lies in the choice of, and adaptation to, the site.

Parking garages pay for themselves in two different ways: money is collected directly from the driver in a commercial enterprise, or the cost of building and operation is charged up to plant as an adjunct to a large single organization or cooperatively by several of the same. Since the latter is a simpler case of the former, this article will deal with the commercial parking garage with some notes added about the non-commercial structure.

Income Sources

There are five fairly distinct sources of income for the operator of a commercial parking facility. The first four are: short term, all day and contract parkers, and "presold" spaces, and the fifth is rental space for shops or offices. Presold spaces are used by arrangement with local merchants who validate parking claim slips on a time-per-dollars-spent basis. A representative scheme here is the "Park-And-Shop" method. Users of the above service are among the short term group mentioned earlier, the all-day or long-term parkers are employes of nearby enterprises as are the contract parkers, the latter being, in the main, professional types or others who must be in and out several times during the day. The fifth use (stores) is for the most part used to fill out the income in a garage built on expensive land, usually in an area that needs that type of space anyhow. This will be dealt with in more detail later in this article.

The available location, with its prevailing typical customer, pretty well fixes the type of operation that will be a profitable and, to a degree, the type of structure that may be built. If the predominant customer is the commuter, the long term parker, cir-

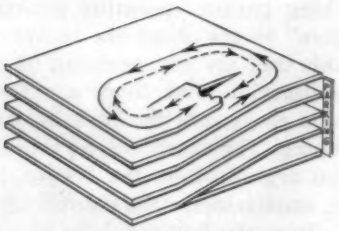
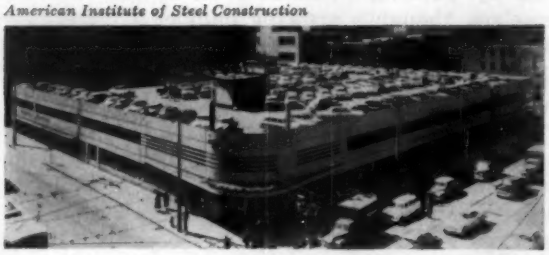


Fig 1
STRAIGHT RUN,
TWO-WAY

This is the simplest arrangement structurally. An inclined plane between floors, wide enough for two cars and simple to frame. It compares poorly with other schemes because of many friction points, including the two-way ramp

American Institute of Steel Construction



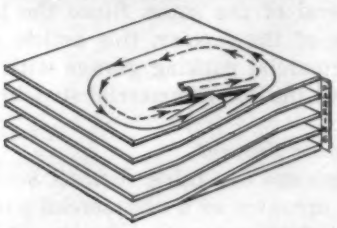


Fig 2
STRAIGHT RUN,
ONE-WAY
OPPOSED

This is a logical development of Fig. 1 above. It is a little harder to frame but most of the traffic friction has been relieved by the use of same-way circulation and one-way ramps

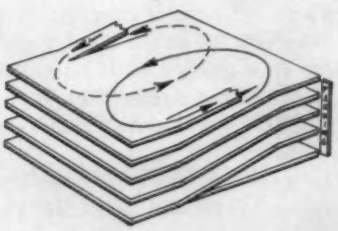


Fig 3
STRAIGHT
SEPARATED,
SHORT CIRCLE

When the ramps are separated, new circulation schemes are possible. This one has opposing circulation and two points per floor where the paths must cross

culation will be important. The garage will have to load up in a hurry at 8:45 to 9:00 AM and empty quickly at 5:00 PM.

Another type of parker in another location such as the shopping area will call for operation that emphasizes accessibility rather than speed in filling and emptying. In other words short term parking with unpredictable arrival and departure times. If, however, there are theaters in the neighborhood, the evening activity is apt to be somewhat of a scramble at curtain time. Add evening shopping to this and one has a really hot exit-demand. Closing time at the stores and the theater produce the fastest-growing, impatient, groups of customers in parking.

A third location, in an area largely occupied by hotels, will not have very strong peaks of activity beyond a noticeable increase in inbound traffic in the evenings and outbound in the mornings. The peaks are not nearly as sharp as in the above examples. Patrons park for longer periods but they do not all leave or arrive at the same time.

The distribution of parking "generators" (the shops, offices, theaters and hotels mentioned above) is important as is the traffic pattern in the area. Some authorities believe that there will be no through traffic in the downtown streets of the future, that streets will serve only as access routes to off-street parking facilities and as delivery routes for trucks and public transit vehicles. The trend is certainly evident.

Traffic Considerations

Some authorities believe the garage should be located between two one-way streets of opposite direction. With an entrance and an exit on both, the patron then has a free choice of entrance or exit direction. Others, citing possibilities for internal traffic confusion, disagree. With only one exit and one entrance it is best to locate them on the same street so that the incoming cars in effect hold a lane open for the outgoing ones. If it is possible to arrange it, the outgoing cars should have a few carlengths along the curb to allow entry into traffic. In this connection it is well for the architect to find out what the city planning and traffic control departments have in store for the chosen area. A garage, once built, cannot be turned around to fit a changing traffic pattern.

Traffic Determines Size

The traffic characteristics of the area to a great extent also determine the practical size of the garage. Authorities state that the average street will deliver 400 to 500 cars per hour per lane. Interlane friction (traffic confusion or conflict) prevents two lanes from delivering twice this number. Under normal conditions it is felt that the garage should be limited in size by the number of cars that can be delivered to it in an hour. Another practice,

based on experience, tied in with maximum waiting time for delivery of a car, is that the garage should be able to fill and empty in an hour. Consultants advise that, where two streets deliver to a garage, the garage be split in two, since the internal traffic can become complicated when there is a choice of exits. It is a good general axiom for any design involving traffic circulation that directional decisions should be eliminated completely if at all possible. The more decisions that must be made, the slower the traffic movement.

Lot Size

Another, more obvious, size-determining factor is the size of the lot itself. It is possible to erect a building on a lot with a dimension less than 80 ft but it is impractical. A mechanically operated garage could be, and has been, built on less but the "reservoir" space at ground level needed to absorb peak input loads would then be too small, as is the case with one of the country's first mechanical parking garages. An uncramped minimum dimension for ramp garages is 100 ft. The lot should be on the order of 100 ft by 200 ft or 120 ft by 130 ft for building the most economical unit. These dimensions are for designs with present-day techniques and materials, resulting in the least ramp-dilution of the space among other things. One must remember that news techniques could appear tomorrow.

Under present conditions, a multi-level structure must rise at least three floors in order to make the per-car cost reasonable. Usually the cost of construction of a single floor for parking above the essentially costless ground floor is such as to raise the per-space cost to uneconomic levels. The upper limit in floors is set by the capacity desired with the provision that people are reputed to dislike going around a ramp for much more than six levels.

Lot Cost, Rental Space

Land cost may be such that another rule of thumb may have to be set aside, namely that the land should cost no more than the building. In this situation it may be well to consider allocating part of the ground floor area to rental space for shops and stores. All of the street frontage not used for entrance and exit openings can be utilized and the area beyond a line 50 to 75 ft back of the street front, where the space demand is lower, can be used for ramps and traffic control. Parking use puts no premium on first floor location so no parking revenue is lost by this step. The basement area in this case is more profitably used for parking than for storage by the tenants since it is otherwise "thrown in" with the ground-floor space. It has been found that stores are not willing to pay as rent, a price comparable to the revenue realizable from parking. As an example of first-floor rentals, a garage in Cincinnati, Ohio takes in more than $150,000 in annual

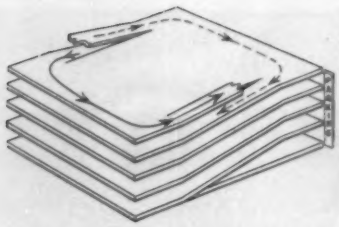


Fig 4
STRAIGHT
SEPARATED,
CLEAR WAY

The circulation is more logical with this arrangement. It is the most straightforward ramp system

L'Architecture Francaise



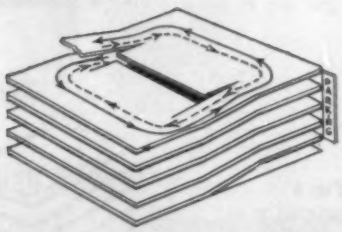
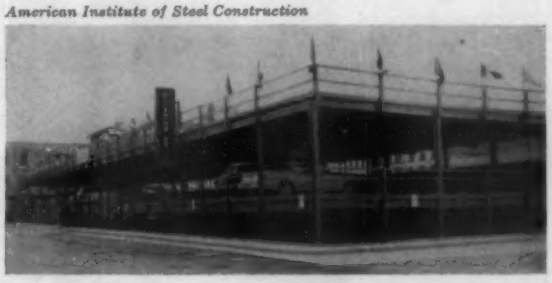


Fig 5
STAGGERED
FLOOR,
DIVIDED,
TWO-WAY

This simplest of staggered floor systems has the obvious fault of opposed circulation. In all of these staggered floor schemes one floor may be narrowed to mezzanine size

American Institute of Steel Construction



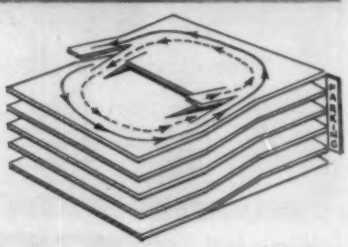


Fig 6
STAGGERED
FLOOR,
DIVIDED,
ONE-WAY

In this development one-way ramps solve the problem of ramp friction. Floor circulation is likewise smoother

American Institute of Steel Construction



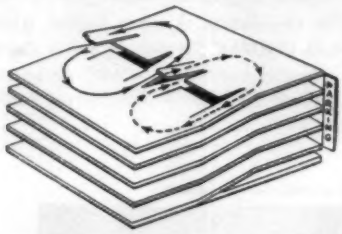


Fig 7
STAGGERED
FLOOR,
TWO-CIRCLE,
ONE WAY

In this arrangement, the circulation has been completely separated. This is the most straightforward of the staggered floor systems

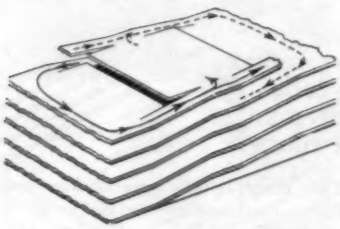


Fig 8
DOUBLE
STAGGERED
FLOOR

This is a combination of staggered floor and Fig. 4. The addition of the mezzanine makes for smooth circulation but it is sometimes necessary for the attendant to drive up to the mezzanine in order to go down

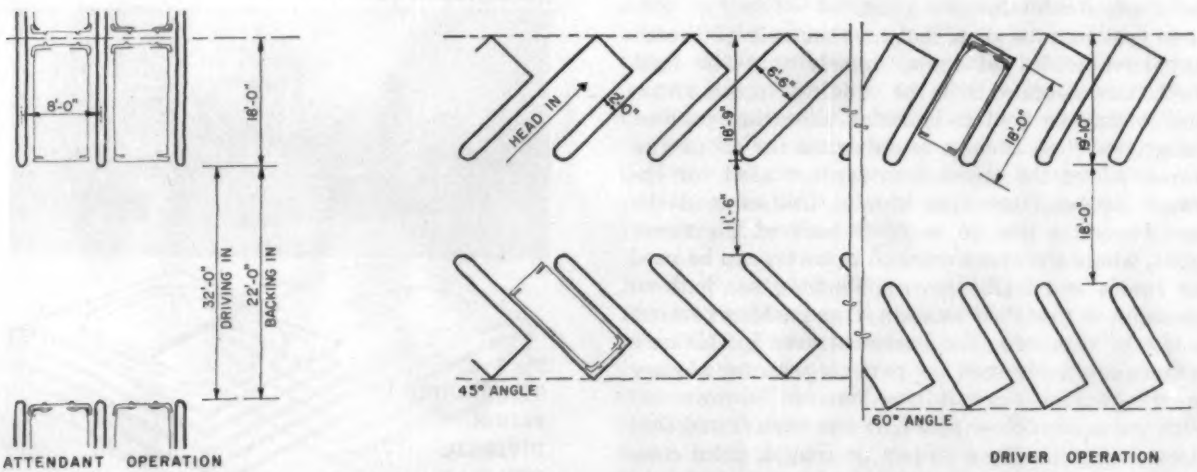
rentals from first-floor tenants, yet on a 210 ft by 100 ft lot, 160 ft by 100 ft is available on the first floor for parking and circulation.

Dual Purpose Buildings

At this point it would be well to deal with the so-called "dual-purpose structure." A garage with rental space anywhere else but on the first floor will, all other things being equal, not work. Code and load requirements for a garage today are such that any other use imposes uneconomical construction expense. Circumstances will always alter cases but the "sandwich" building is apt not to pull its weight. The office floors on top impose more expensive standards on the floors below (heavier columns, more elevators, etc.) and, short of zoning variance or the prospects of high rentals, such a building, trying for two uses, succeeds in neither. Since codes have become liberalized to some extent for the open-deck type of parking structure it has become foolish to build a parking garage with the idea of later converting it to office building use. It is cheaper now to tear one down and build the other from the ground up.

Attendant Parking

Another consideration that influences the shape and structure of a planned garage is the method of operation contemplated. There are three operating methods current today. The traditional garage operation uses a number of attendants whose duty it is to take over the car at the entrance ramp and drive it to the appointed storage spot, or to reverse the process, to go find that car and return it to the driver at the exit ramp. The process is familiar to most drivers who, occasionally or often, visit cities. A great many garages cannot be used in any other way,



Authorities agree on the best individual carspace arrangements. For attendant parking: 90 deg, narrow spaces and double pileups where necessary. For driver parking: between 45 and 60 deg with aisles to fit and wide space markings

being designed with the experienced attendant in mind. Short, steep ramps, confined spaces and the high density packing necessary for profitable operation put too great a strain on the abilities of the everyday driver. More cars can be parked in the same space by using attendants than by letting drivers park their own cars. There are, in consequence, garage designs that are only suitable for this method of operation.

Attendant parking has disadvantages, the largest one being the problem of staffing; a personnel problem complicated by rising wages and the high cost of training. These costs are multiplied by the necessity of maintaining several shifts in order to take advantage of the full parking period. The parking day is anywhere from nine to fifteen hours long, not counting the all-night trade.

Driver Parking

The second traditional method of operation is the self-operated or driver-parked system. Long used in the parking-lot type of enterprise, it is lately becoming popular for garage structures. It can be carried out with, in extreme cases, no personnel on the premises at all. Usually a staff of one or two people is the largest required. There are negligible chargeable damages in this type of operation and cars can be absorbed and discharged faster than by any other system of parking. Of course the packing density must be reduced (by about a third actually) and the circulation pattern of the garage must be planned with this in mind, as well as the reduced skill level of the average driver compared with the experienced attendant.

The driver-parked garage can take advantage of some of the new machinery developed for the parking lots. Among these machines are the ticket-delivery units that obviate attendant-control of entrances. These machines, by the use of a system of treadles and crossing-type gates, ensure that the entering driver takes a ticket stamped with his entry time for delivery to the attendant at the exit when departing. The same treadle system, connected with a comparable system at the exit can be used to keep count of the vehicles in and out and, by extension, the number of vehicles currently in the building. This hookup, known as a "differential counter" can be connected to light up a "full" sign at the proper time. The only critical apparatus here is the treadle system, which must be designed to avoid faulty counting. There are also simple barriers that enforce one-way car movements.

Mechanical Parking

The third method is fairly new, though speculation in the field has been popular since automobiles began. Two of the first of the mechanical parking systems ever built (in the '20s) are still in operation, though neither has encouraged others to build

American Institute of Steel Construction



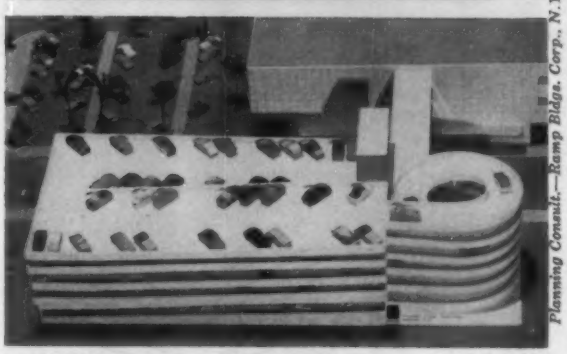


Fig 9
SINGLE SPIRAL SLOPING FLOOR

The simplest form of sloping floor garage, this scheme calls for two-way circulation, a turn-around at the top

Fig 10
SINGLE SPIRAL WITH EXIT RAMP





Planning Consult.—Ramp Bldgs. Corp., N.Y. National Parking Association

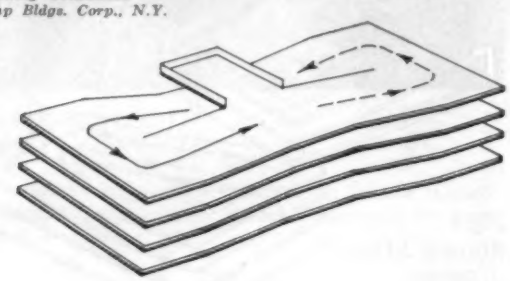
There are several variations of this scheme. Both straight and circular ramps are used with entries on all floors. This arrangement reduces friction, speeds circulation

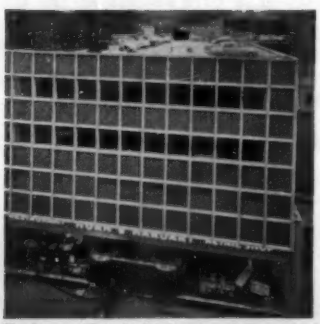


Fig 11
DOUBLE SPIRAL
ONE WAY

Two of the Fig. 10 type put end-to-end, or folded together. Simple circulation and less friction

Planning Consultant
Ramp Bldgs. Corp., N.Y.





Harbeson, Hough, Livingston & Larson, Arch.

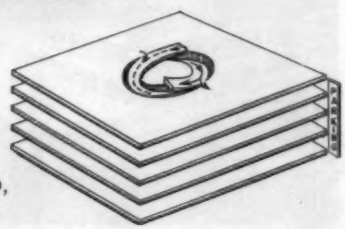


Fig 12
DOUBLE THREAD,
ONE-WAY

Ramps are steeper since they only have 180 deg to get between floors. A popular design with separated flow

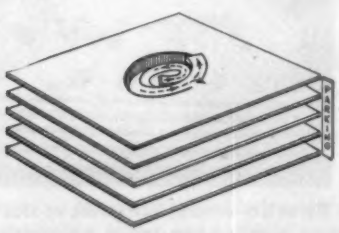


Fig 13
CONCENTRIC
OPPOSED,
ONE-WAY

Separate ramp movement but bad crossings at each floor

similar installations. These systems will be dealt with in the discussion of floor layouts.

Construction

Materials of construction must, of course, be individually chosen according to the needs and economics of the region. Consideration should be given early to a structural system that will allow "clear spans" over the parking areas. This consideration is urged because of the present fluid state of the overall width of the automobile. Today's Imperial is 6 ft 9 in. wide. The Continental is 19 ft 1 in. long. In older garages (ARCHITECTURAL RECORD, Feb. '29) the column spacings were arranged to accommodate three cars in the space between. Now these garages are wasting up to one-quarter of their space because only two cars will fit between the columns. With clear spans, when Detroit calls the changes, all it means is new painted spaces.

Individual Car Space

On the subject of painted spaces, it has been found that drivers are more apt to take care in staying within their allotted space if that space is delineated with double lines, allowing 2 ft between cars.

Attendant-parked cars can be stowed in 8-ft spaces at an angle to the roadway of 90 deg. This is the most efficient arrangement since, though cars can be more closely spaced, time is then lost in squeezing in and out of cars. With some care in scheduling, cars can be parked two deep in attendant operations.

In driver-parked garages, spacing must be more generous. Minimum intercar spacing is given as 8 ft 6 in. by most authorities. With slightly increased roadway widths, 90 deg parking may still be used but garage owners are finding that turnover is speeded up considerably when 45 or 60 deg stalls are used. Consultants state that this increased turnover makes it profitable to take the 25 to 30 per cent loss in parking density that results. Of course double parking becomes out of the question in driver-parked operations.

Floor Layouts

There are many possible floor layouts that have been developed to meet many needs and conditions, these latter include the shape and size of the lot, the slope of the land, the type of clientele and other factors pertinent to the individual case. These floor (and ramp) layouts appear in many guises in the actual structure but are here shown (figures 1 through 13) in the simplest arrangement. There are four main divisions in ramp layout; straight run, staggered floor, sloping floor, and semi-circular. The ranking is arbitrary.

Ramps may be placed at any point on the floor, or outside the floors if the plot plan permits, sometimes to better effect than the foregoing schemes. The circular or straight exit ramp has already been men-

tioned in connection with the scheme of Figure 11.

Machine Parking

The fourth type of structure is determined in its shape by the kind of proprietary machine that is chosen to do the job. There are two types that have been more widely-used than any of the others; they are the Bowser and the Pigeon-Hole machines. Use of these units results in essentially the same shape of building. Both machines use some form of two-dimensional elevator, one which can travel sideways as well as up and down. In the Bowser system an attendant drives the car into the cab and, while sitting in the car, operates simple controls which cause the cab to move both up and sideways (if necessary) to line up with the appointed resting place of the car. The attendant then drives the car into its space and returns in the empty elevator to the ground floor or, if required, moves the elevator to another cubicle to pick up another car for delivery. In a later development, the Pigeon Hole system, the driver places his vehicle in the appointed spot then locks it and departs. An operator standing in the elevator cab extends a "dolly" that picks up the car and places it in the elevator. When the cab reaches the proper cubicle the dolly places the car therein.

Both machines in effect force about the same shape on buildings that incorporate them. There must be an open central slot about 20 ft wide cutting the building in two. On each side of this slot are rows of shelves either one or two cars deep (both machines make it possible to stack cars two deep). There are several machines that are roughly similar to Pigeon Hole, one in this country, the "Minit Park," and a European machine called "Autosilo." There is at least one installation of each in operation.

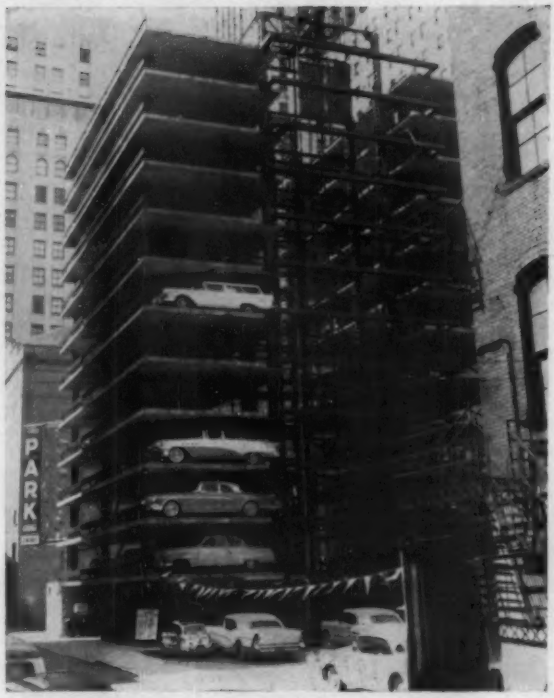
Of other systems there are the Kent Garage, a pioneer, the Park-O-Mat still operating in Washington, D. C., and several others with at least one installation either in operation or projected, among them being Roto-garage and Speed Park, both fully automatic operations.

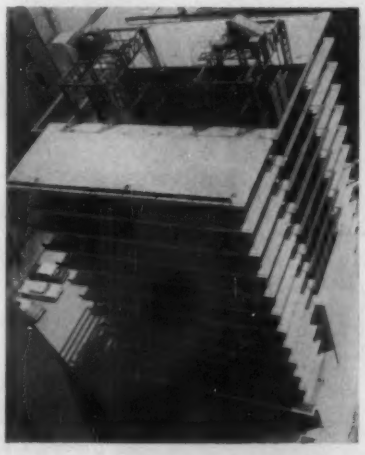
There are, of course, many garages made over from or using the same construction as warehouses. They were built quite a while ago and prices and standards have changed too much for that type of construction to be considered today.

Construction Reviewed

Different floor schemes have different degrees of applicability for attendant- or driver-parked operation. Plans 1, 2, 4, 10, 11, 12 and 14 are more suitable for drive-parking operation with perhaps the inclusion of 3, 6 and 8 as secondary considerations. All are used in attendant operation with the exception of the sloping floor schemes 10, 11 and 12 which only come into their own as driver-parking structures.

Opportunities to use the shape of the terrain as



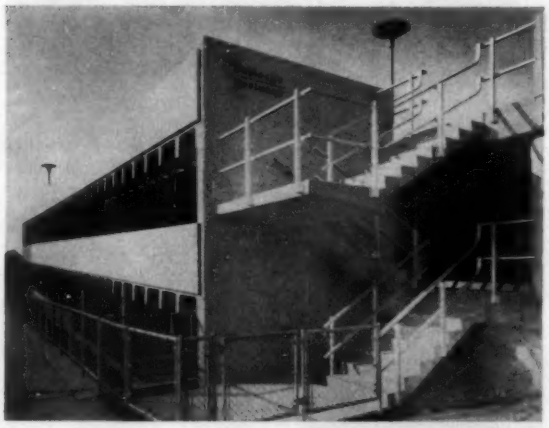




An example of the spare design possible with mechanized garages, the Tower Parking Garage in Columbus, Ohio, Tibbals-Crumley-Musson, Architects, uses a Pigeon Hole machine. Rising 88 ft above street level it is the tallest lift-slab structure in the U.S. *Center*: Top view showing elevator machinery. *Lower*: Ground floor view showing the pickup dolly of the parking machine in operation



This mechanical garage, the Dundas Square garage, John B. Parkin Associates, Architects, is in Toronto, Ontario and uses a Pigeon Hole system



Built for the employes of a Los Angeles department store, this garage, Welton Becket and Associates, Architects, is entered directly from the street on all three levels



This block-square garage in Houston, Texas, Cowell & Neuhaus, Architects, H. E. Bovay Jr., Consulting Engineers, has separate spiral ramps, shops on the street floor and a (so far unused) heliport on top

part of the garage structure and circulation plan should not be overlooked. Many garages have been built with entrances on all levels directly from the street. This layout makes for more profitable use as driver-parked systems with one of the previously-mentioned mechanical ticket dispensers at each entrance and a single exit covered by the cashier.

Non-Commercial Garages

There are many cases where a commercial enterprise will find it economical to provide parking space for its patrons without charge. This is most usually done by providing a parking lot but there are quite a few garages that have been built for this purpose. Non-commercial garages should be no less carefully designed than their commercial counterparts.

There are very few good rules of thumb that can be applied to gauge the necessary capacity of a projected structure. The rule of 7 to 10 cars per thousand square feet of rental space, sometimes used in shopping centers, is broken as often as it is observed. Hospitals, which vary extremely in use and operation with the individual case, cannot be planned for unless the pattern of public transportation is studied for the area, the type of practice and treatment analyzed, the number of doctors and the duration of visits known, and the complex interplay of emergency, outpatient, supply, doctor and patient traffic carefully gone over. Beyond the fact that there are an average of two non-doctor staff per bed, there is no "general" case with hospitals.

Hotels often support garages and here is one application where machine parking fits well, hotels have very few peaks of activity and those are comparatively low ones.

SUMMARY

Making a profit from parking is dependant on design to a greater extent than many other enterprises. A bad guess in the planning stages can be expensive if not disastrous. There are new angles and twists every year in the design and construction of parking facilities. A few firms of consultants specialize in the design of these facilities and are consequently better informed than the more generally employed designer. The National Parking Association can furnish a list of these firms if any considerable enterprise is afoot.

REFERENCES

National Parking Association, 704 Sheraton Building, 711 14th St., N.W., Washington 5, D.C.

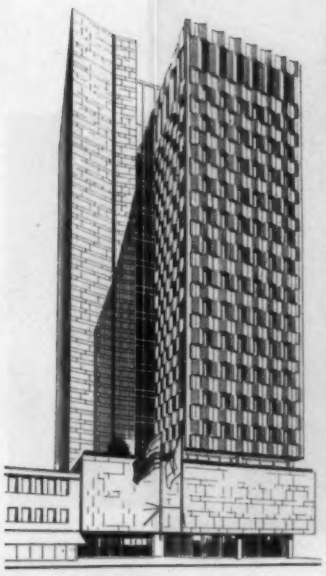
Parking Magazine. Published by N.P.A.

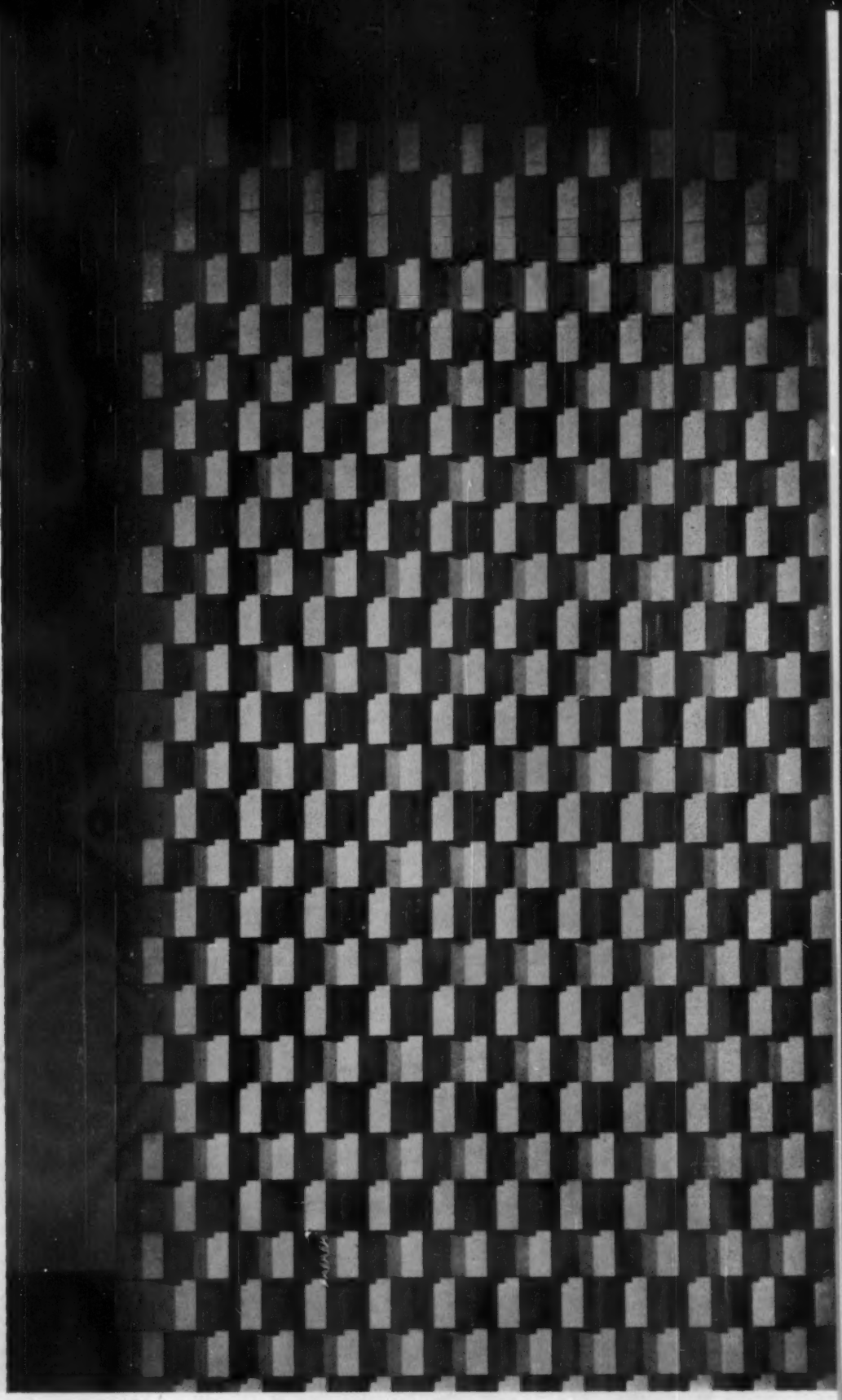
Parking Facilities (includes excellent Bibliography). AIA BTRG 7-1, 2 American Institute of Architects, 1735 New York Avenue, N.W., Washington 6, D.C.

Traffic Design of Parking Garages. The Eno Foundation for Highway Traffic Control, Saugatuck, Conn.

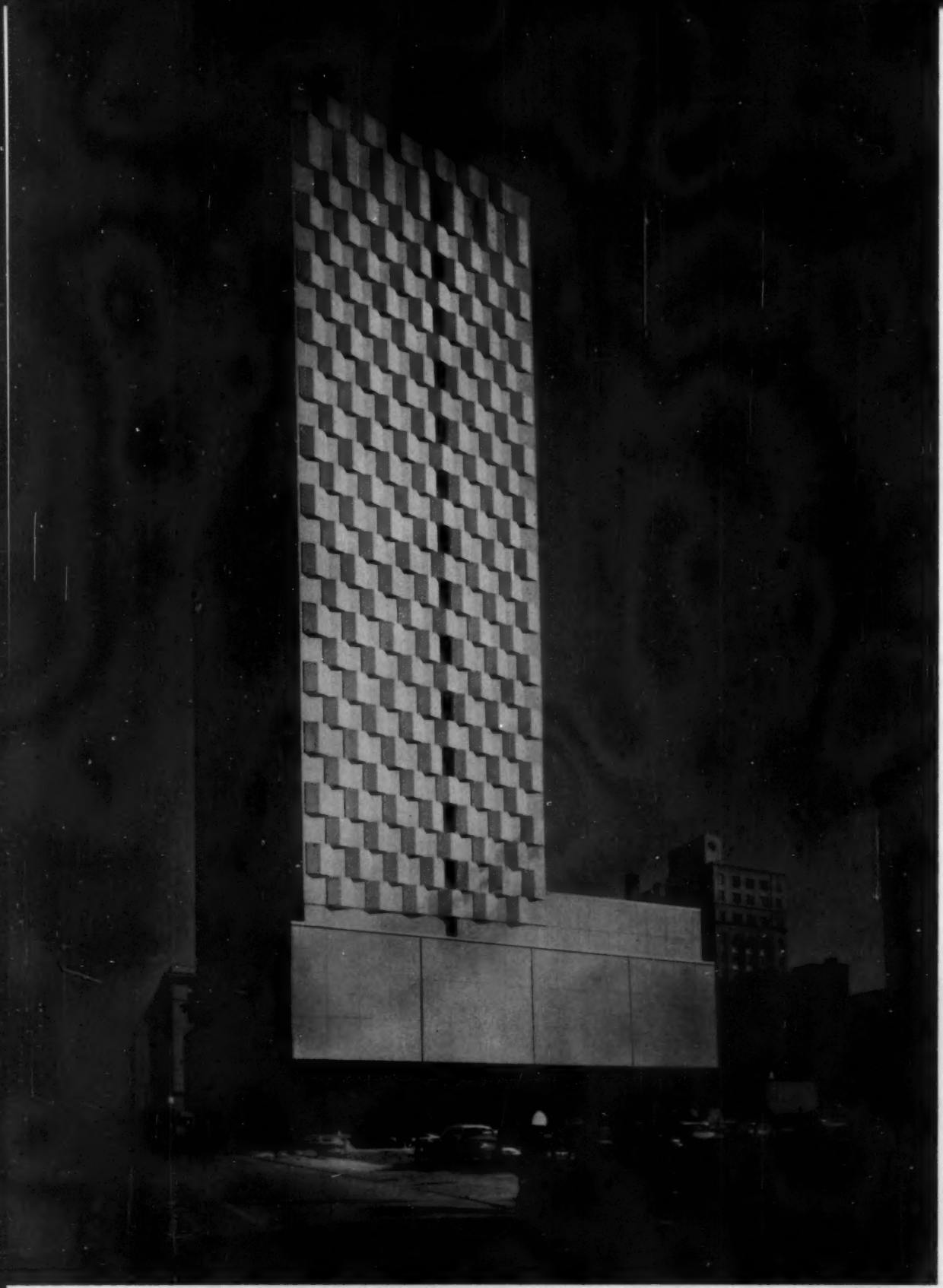
SPECIALISTS

Manufacturers of Mechanical Parking Systems; The Bowser Engineering Company, 112 S. W. Second Avenue, Des Moines 9, Iowa; Pigeon Hole Parking, Inc., Peyton Building, Spokane 1, Wash.; Speed-Park, Inc., 342 Madison Avenue, N.Y. 17, N.Y.





BANK BUILDING WITH PRECAST FACE



The view above shows the elevation of the building that faces the parking lot at the rear. The wall for this façade has been handled differently than the other three (page 189) since it faces the blazing afternoon sun. Windows have been reduced to a minimum in order to cut down the air conditioning load

First Precast Concrete Curtain Wall

Wachovia Bank Building
Charlotte, N. C.

Harrison & Abramovitz
Architects
A. G. Odell, Jr.
Associate Architect

J. A. Jones Construction Co.
General Contractors

The office building curtain wall has recently appeared in a variety of manifestations, yet still new ones continue to crop up. Here is another "first"—the first tall building skin of precast concrete units. It is interesting to note the recent wide use of precast concrete as both a finish and structural material. These prismatic components, off-white in color and sparkling with mica chips, are arranged to temper the southern sun in order to reduce the air conditioning load, and are also designed as a decorative texture for the building's face. Such a skin weighs less than one of natural stone, thus making possible a lighter than usual reinforced concrete structural cage.

The 15-story building—which rests on piles—is essentially two towers coming down on a base that houses the public banking activities and rental areas. The main tower, of long-span (54 ft) construction, makes use of 5000 lb concrete and provides column-free office space; while the smaller tower contains services and main public circulation. The two towers are connected by a glazed link.

The ground floor is devoted principally to rental space (store, barber shop, luncheonette) and office building lobby. The only banking function at this level is the time payment collection department.

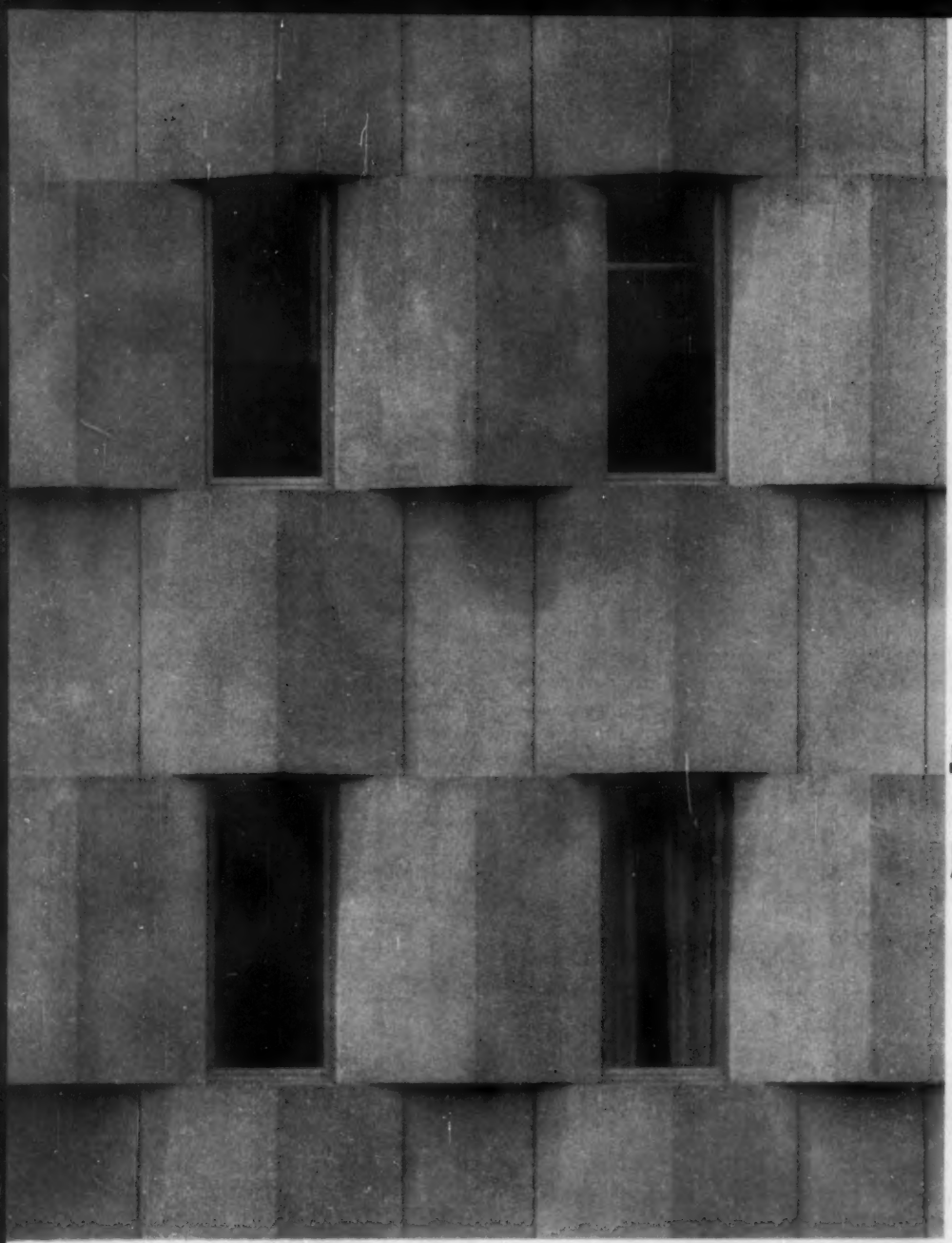
Severud, Elstad & Kruger, Structural Engineers; Jaros, Baum & Bolles, Mechanical Engineers; The Firm of Edward E. Ashley, Electrical Engineers; Dan Cooper, Interior Decorator.

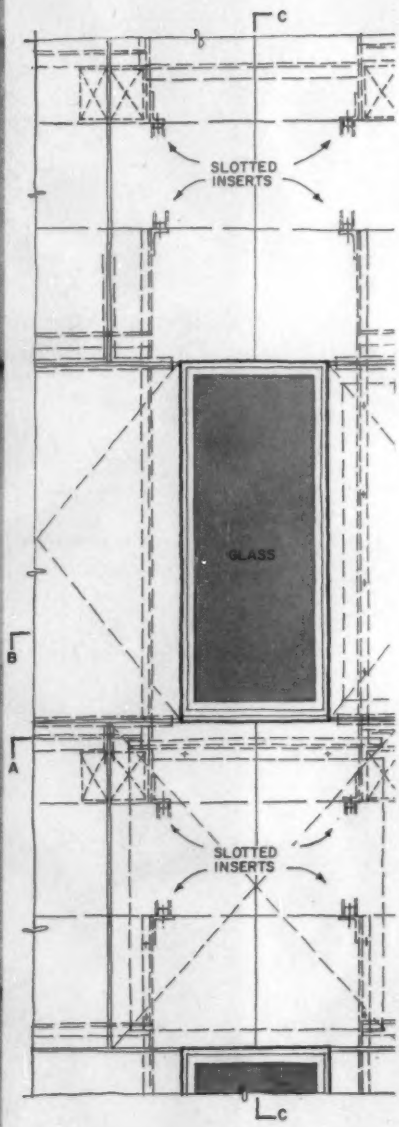


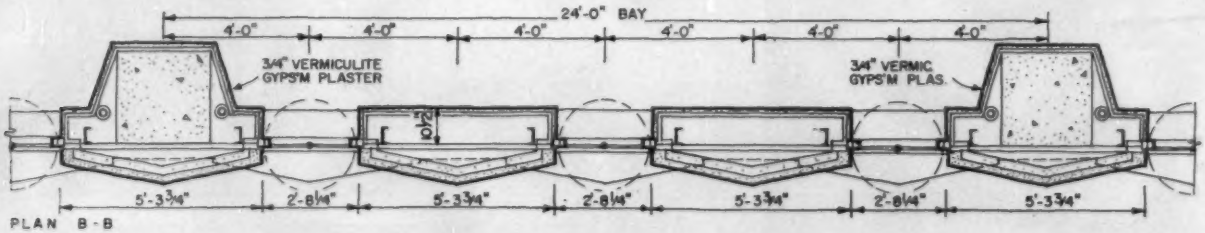


All photographs by Joseph W. Molitor

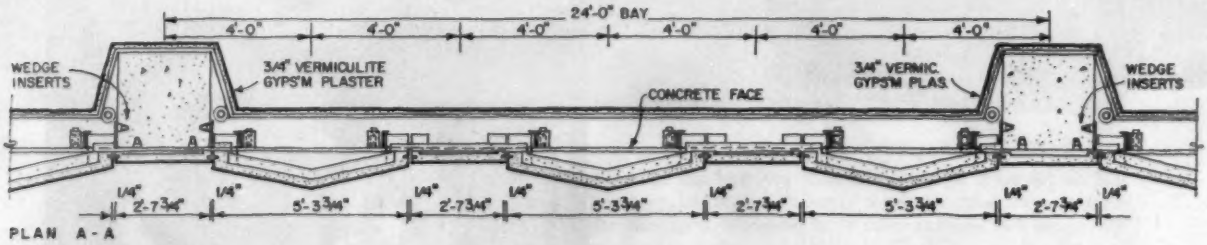




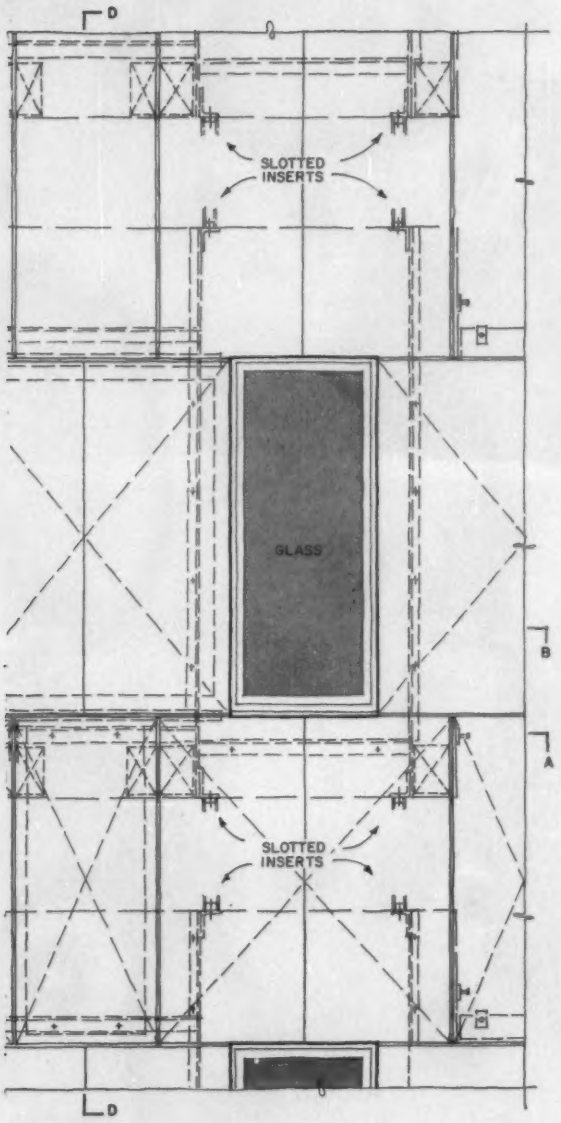


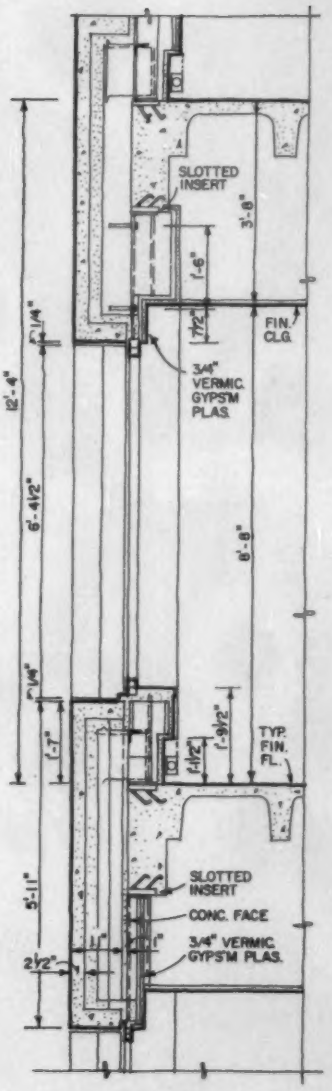


PLAN B-B

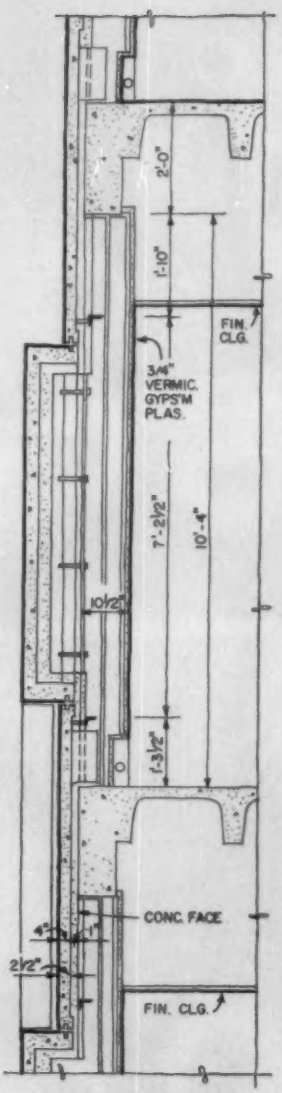


PLAN A-A





SECTION C-C



SECTION D-D

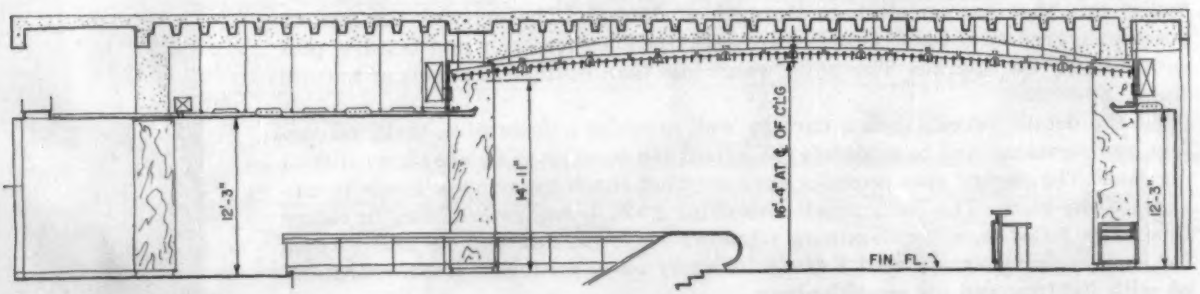
Wachovia Bank & Trust Building

The unique skin is composed of 2½-in. thick precast, faceted units—5½ ft wide and 6 ft high—fastened by lugs to the structural frame and aligned by a series of 5-in. vertical channels. The precast concrete units are of a dense, carefully controlled mix that has an ultimate strength of 7500 lb. The exterior surface exposes an aggregate of light colored, warm-gray pebbles for color and texture, plus quartz chips for sparkle. The units weigh less than equivalent panels of natural stone.

As the details reveal, such a curtain wall provides a decorative, textured surface and serves as well to modulate the bright sun in order to reduce air conditioning load. The design also provides canopies that shade the window heads to ameliorate sky-glare. The 3322 panels, weighing 2000 lb each, were hung in record time. The 2-ft-4-in.-wide aluminum windows—tall, narrow and vertical pivoted for easy cleaning—are placed 8 ft o.c. to carry out a modular system coordinated with lighting and air conditioning.






12'-3"
14'-11"
16'-4" AT ℄ OF C'LG
FIN. FL.
12'-3"

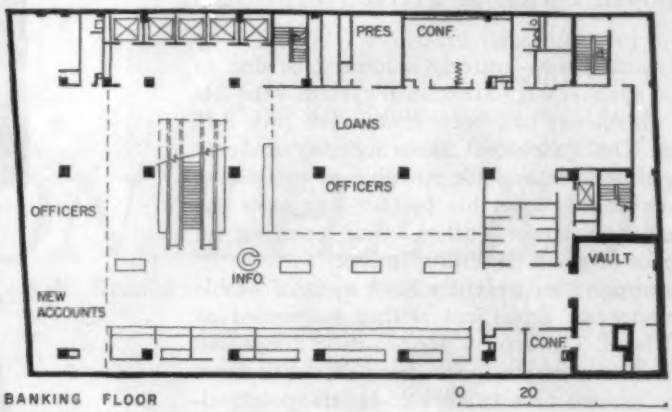


Wachovia Bank & Trust Building

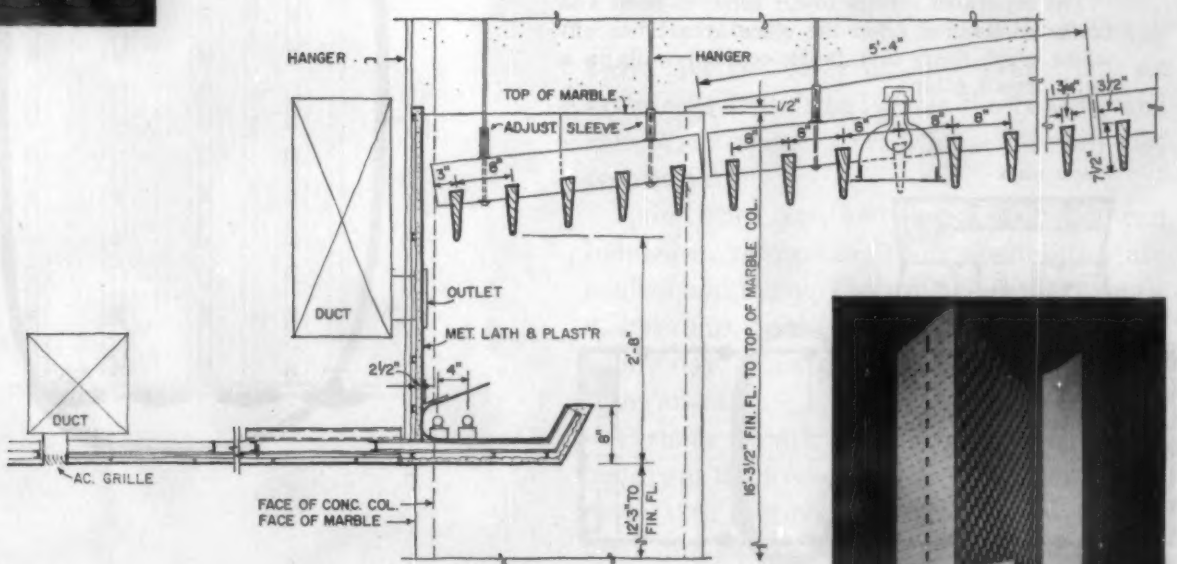
The main banking room of 11,000 sq ft is located on the second floor and can be reached by electric stairway, elevator, or stair. The most striking feature of this space is the slowly curving ceiling of red birch louvers and downlights, shown in section and detail on these two pages. The pattern of downlighting is supplemented by coves along either side and a wash of texture light at each end wall.

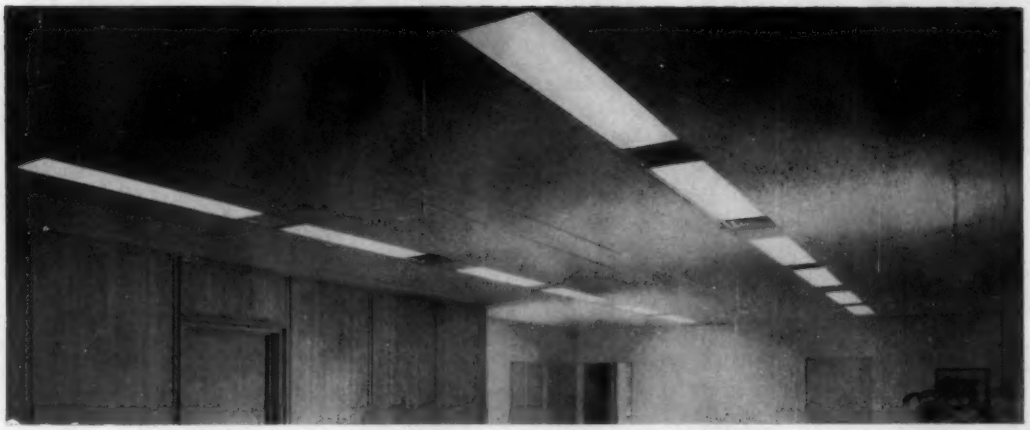
Color and materials have been employed effectively in this room, which has a floor of light beige terrazzo with 3/8-in. bronze dividers in the public portion and beige carpeting in the officers' areas. Wall paneling is American cherry; the 110-ft-long banking counter is Brazilian rosewood and white marble. The vault area and certain doors are in burgundy, while the wall to the rear of the banking counter is painted a vivid blue. The desks and chairs are walnut with leather upholstery.

The entire effect is sprightly and warm, yet has the dignity traditionally associated with the banking function.



BANKING FLOOR





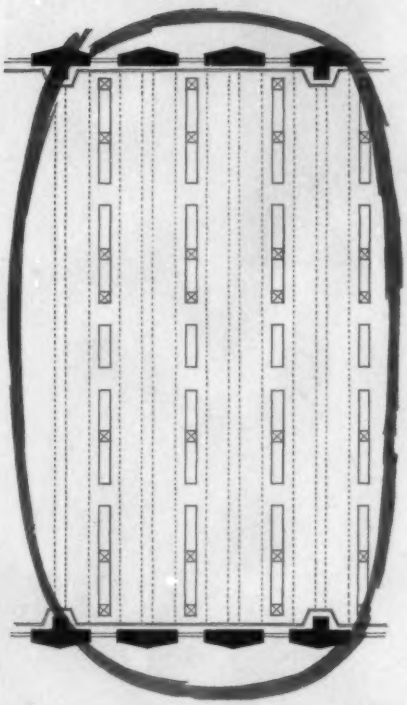


Wachovia Bank & Trust Building

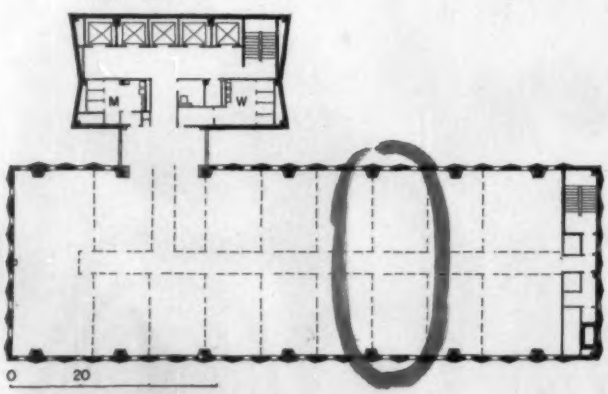
On a typical floor—entirely column free due to the wide span (54-ft) structural system—the 24-ft bay dimension has been tri-divided into 8-ft modules. The fluorescent strip lighting and air conditioning outlets (both movable at will) have been coordinated into this pattern—as have the telephone and power outlets—thus creating an open space of great flexibility in use.

Each upper floor provides 8500 sq ft of usable space under an acoustical ceiling suspended at the 8-ft level. The typical floor-to-floor dimension is 12 ft. The concrete beams vary in depth from a 40-in. haunch to a typical 22-in. midpoint, allowing plenty of room above the ceiling for runs of ducts, pipes, etc.

The separated service tower removes noise and traffic congestion from the office areas; has off-white vinyl floors and fabric-covered walls in a light brown color.



TYPICAL FLOOR



RAIN ON THE ROOF

by Elizabeth B. Kassler

From heaven the gentle rain still falls,—but now upon sound-deadened roofs, to disappear without trace into an elaborate system of gutters, downspouts and sewers. Down the drain goes an act of grace.

Another approach is possible.

Rain can be welcomed as a natural medium for waterplay, and the gurgle of the gargoyle can sound in our land.

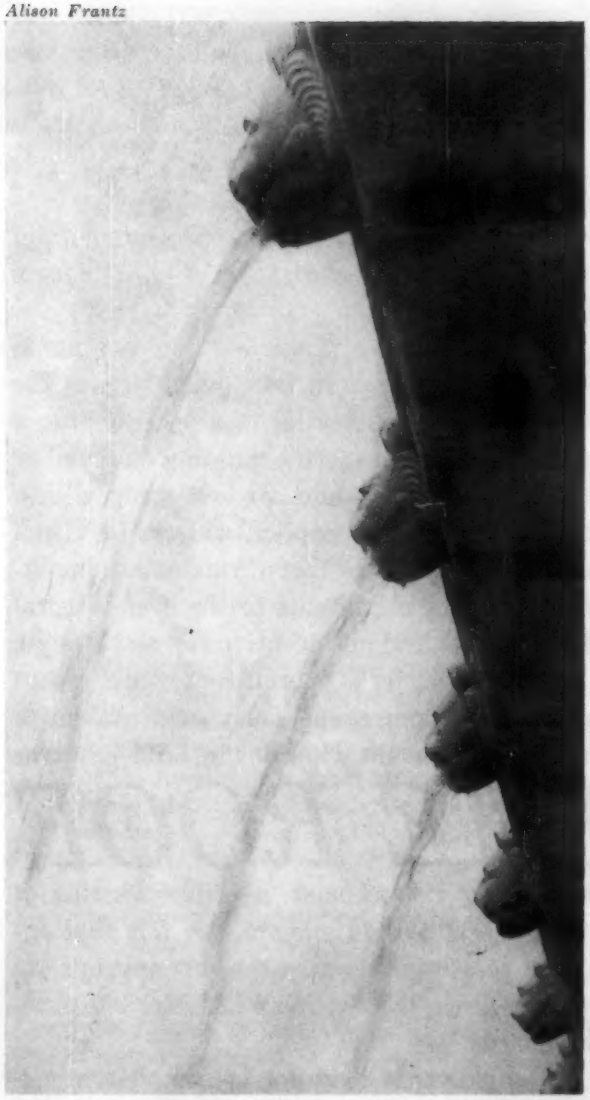
At a time when architects are tending to seek their challenge in the particular—in the very individual potential of a specific site, a specific climate, a specific building material or living preference—and are searching within their problems for implicit sources of visual enrichment, then the fact of rain rather inevitably becomes a stimulus to the architectural imagination and an incentive for new design. . . . LeCorbusier's magnificent water spout at the Ronchamp chapel is no accidental quirk in his development. How dry by hindsight was the young LeCorbusier, archpromulgator of the generalized statement, who felt that interior pipe-columns were the only appropriate way to drain the flat roofs of his chaste stuccoed boxes.

A noble spout may not be complete atonement for a leaky roof; nevertheless, as Frank Lloyd Wright observed long years ago, an architect's best friend is his limitations, and rain, the architect's traditional foe, can also become his ally.

Rain comes free, and even a poor man can indulge in rainworks. Their possibilities are endless and lively. Their disadvantage, single and serious, is the difficulty of saving for a sunny day, when gargoyles are dry and cisterns are still.

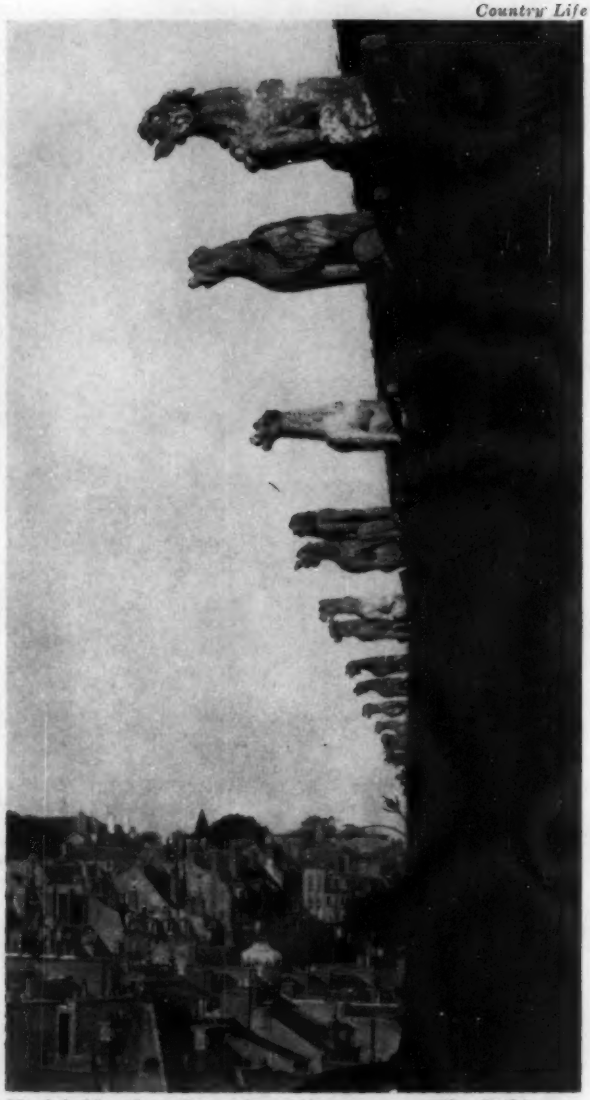
Perhaps we are at some such point in our history as the French cathedral builders of the early 13th century, when they were carving their first gargoyles and finding them good.

Alison Frantz



The ancient Greeks used marble or terra cotta lion-head spouts on their important buildings, spacing them regularly in the sima of the horizontal cornices of their tile roofs and projecting them only a foot or so—just enough to throw the water well away from the walls. The origin of these regurgitating mouths is lost in the fog of pre-history, but one suspects such a gesture of propitiation as is more evident in the medieval gargoyle. This potograph, from the recently reconstructed Stoa of Attalus at Athens, originally built around 150 B.C., may be the first to show a classic lion spout in action. In a dry season, the archaeologist-photographer used buckets of water to achieve her end

Country Life



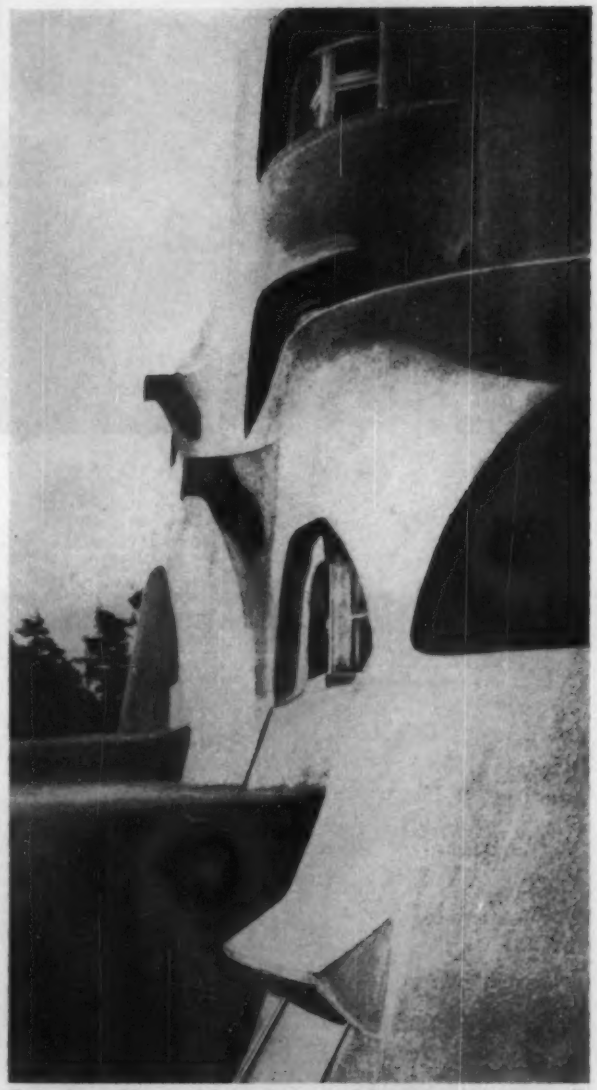
Much bolder than the ancients' lion spout was the Gothic gargoyle, cantilevered far out into space and thus contributing hugely to the characteristically prickly silhouette of Gothic buildings. From 1220 or so, in France, they were of stone, carved as animals, devils or humans, and becoming progressively more profuse, more leanly protruberant, more finely carved, more self-sufficient. Abbé Auber has interpreted these predominantly grotesque, spewing shapes as devils enslaved by the church to perform menial labor. The French loved their gargoyles so much that they kept them well into the Early Renaissance, as in the wing of Francis I (c.1508) at Blois, illustrated above

Rain on the Roof

If the disposal of roof water offers a challenge to the architectural imagination, so do the sight and sound of its arrival.

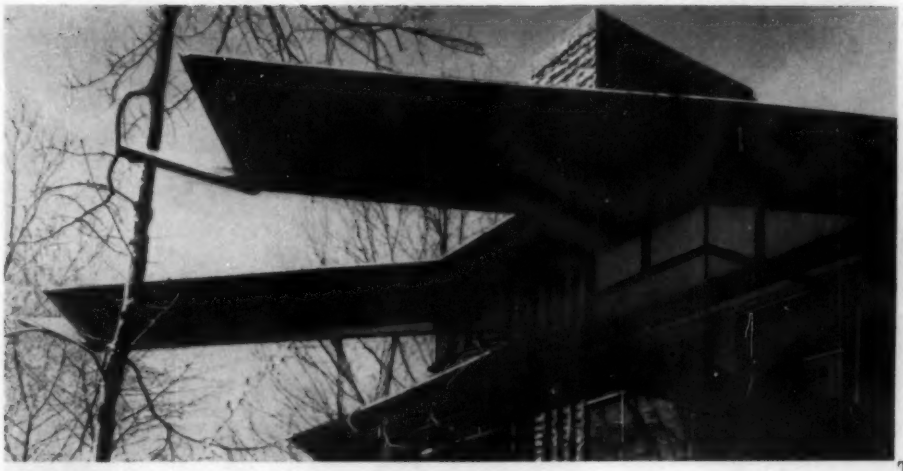
Most of us recall with varying degrees of nostalgia the plop of rain on stretched canvas, and some can remember its monotonous beat on tropical corrugated iron, but has anyone ever wilfully concocted a roof to achieve sound effects other than silence? Even the Japanese, unusually sensitive in their response to nature, have discriminated here only to the extent of using quiet thatch rather than noisy tile over rooms used for sleeping. It must be conceded that the design of a roof as an ensemble of percussion instruments would have little popular appeal, but it might be an amusing experiment.

Of more general interest is the possibility of having a look at rain and snow as they settle on the roof above one's head. No one moves happily into a house with an ordinary opaque roof who has ever been privileged to live under ceiling transparencies, for he has known the pleasure of looking up to see the rain come plopping on the pane until a slather of water obscures the separate drops, and he has seen the snow deposit as single crystals and gradually build up into translucent drifts. Rob such a man of his up-view and the chances are that he will feel grubby and claustrophobic, for observation of nature from the sidelines of windows is not at all the same direct experience. . . . The bedridden "horizontal man" normally faces a bleak blank ceiling. Why not fashion hospitals to allow him a peephole to sky and clouds, sunshine, rain and snow?

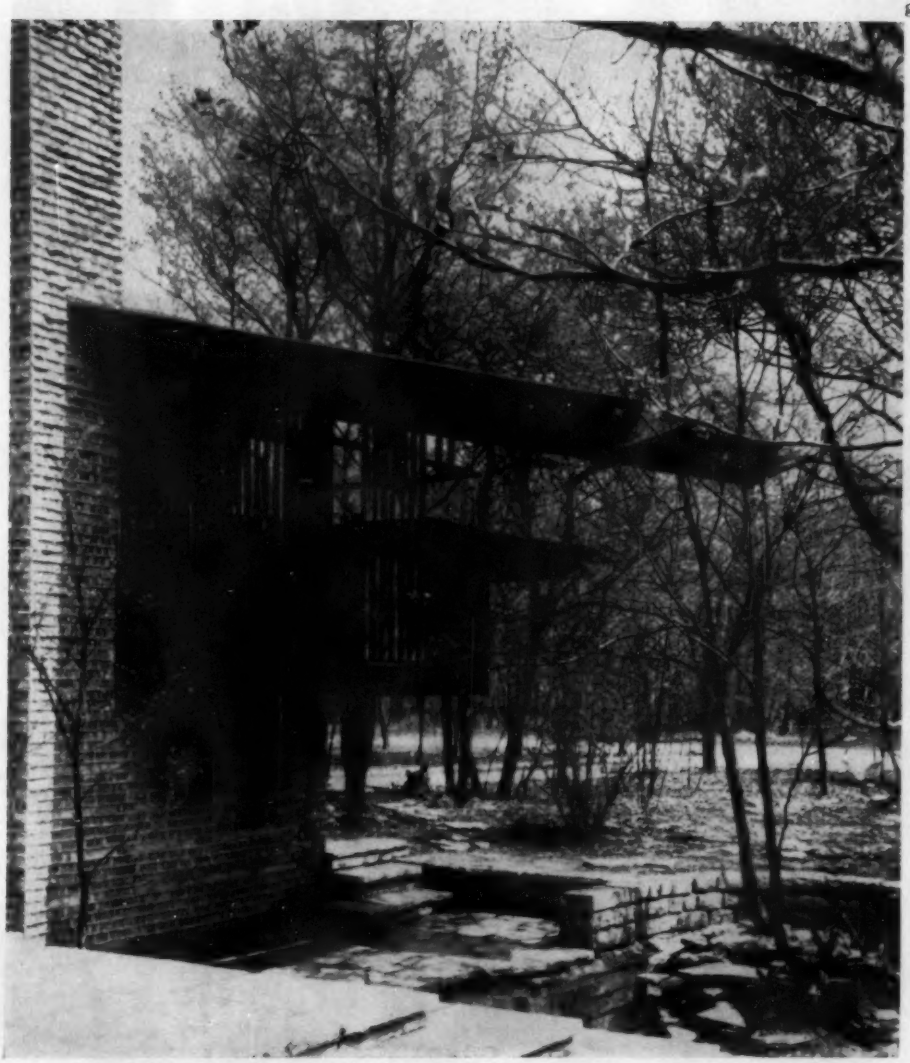


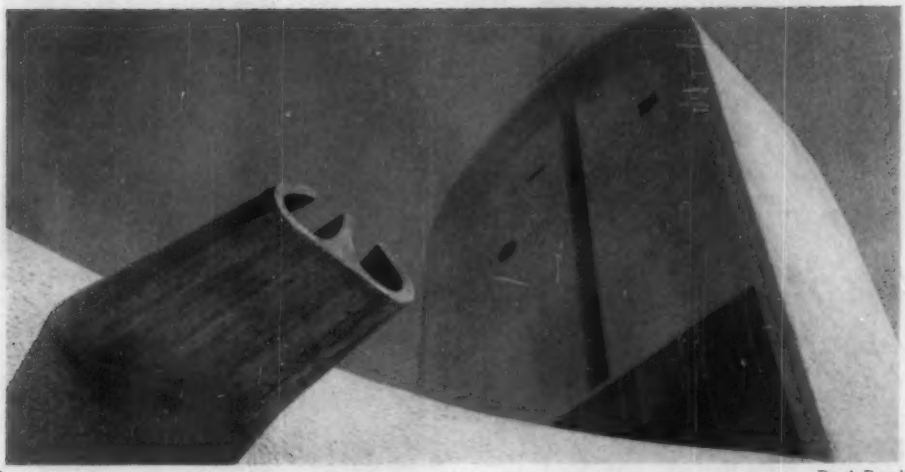
Today's architect, if he is interested in water spouts at all, tends to give them at the very least a Gothic importance.

The first to realize the contemporary potential of the gargoyle may well have been Eric Mendelsohn. More than thirty-five years ago—in 1920, to be exact—Mendelsohn drained the storied decks of his famous Einstein Tower at Potsdam through four large spouts, conceived as taut projections of the massive curving concrete walls. Walls and water-spouts are one—all belonging to the great molded continuum



The wooden gargoyle—at its characteristic best in Bruce Goff's 1937 Colmorgan house in Glenview, Illinois. Twin V-section gutters cantilever out to spill their contents into a rustic garden pool



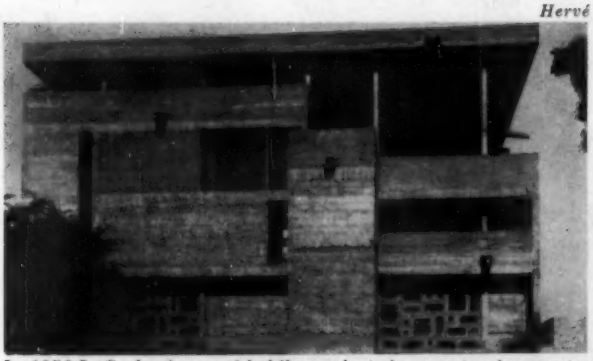


René Burri

The concrete gargoyle—at *its* characteristic best at Ronchamp, where LeCorbusier has cut and bent the top of a great textured wall into a single spout, which drops roof water in a monumental tub



Hervé



In 1956 LeCorbusier used boldly projected concrete pipespouts to drain the flat roof and raised verandahs of a house at Hyderabad, India

Hervé

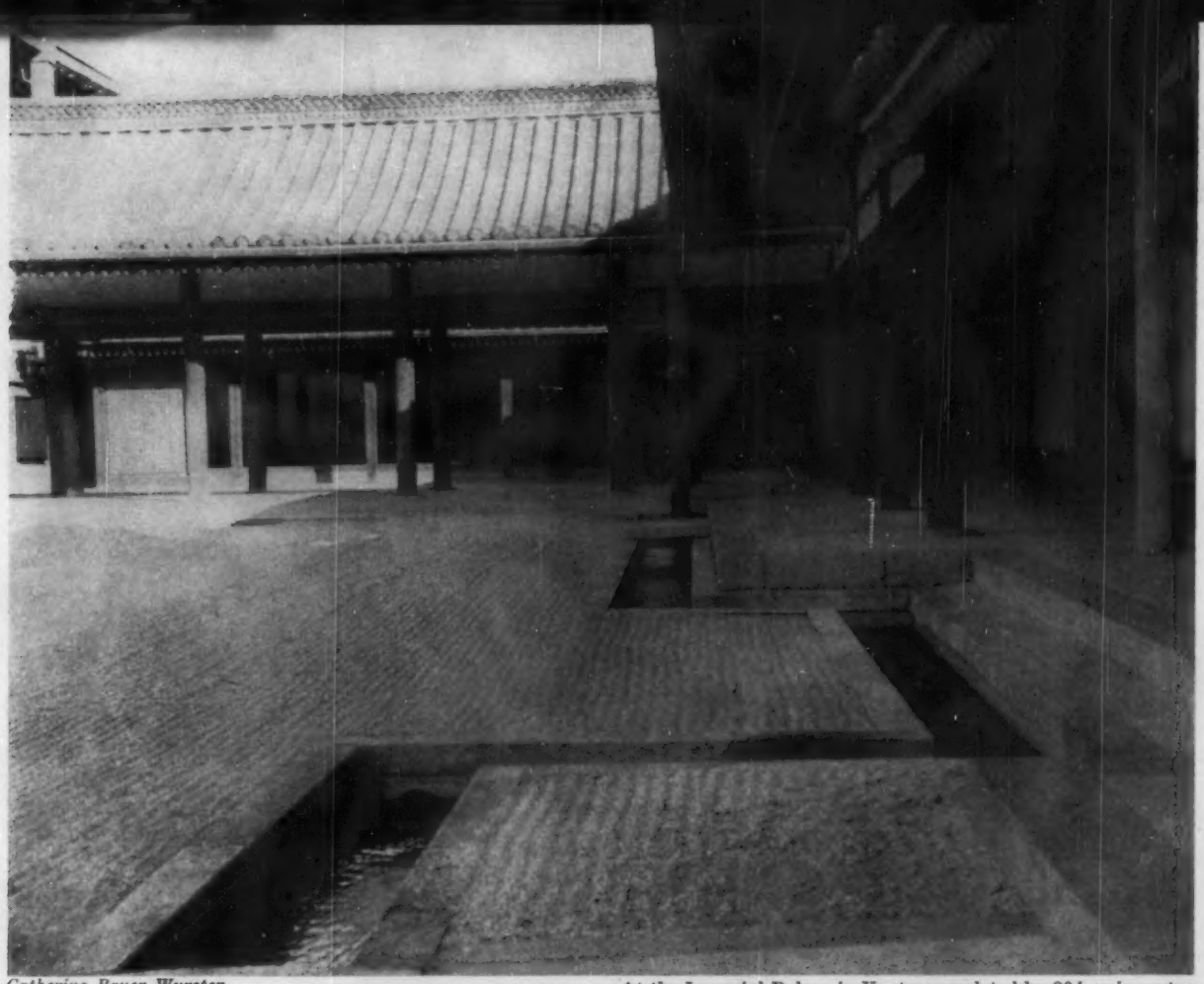


Another example of LeCorbusier's architectural exploitation of rain in recent Indian work is this chute that drops roof water into a square cistern. Ahmedabad, 1956

Amedeo Maiuri's Pompeii



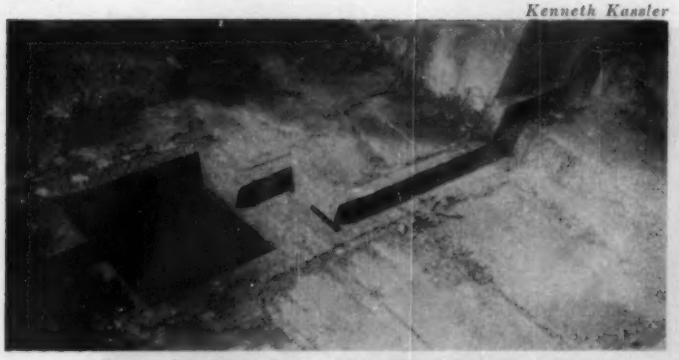
The compluvium of an ancient Roman atrium-house was often embellished with terra cotta animal heads which spurted water collected by the insloping tile roofs into the rectangular basin beneath. Pompeii, before 79 A.D.



Catherine Bauer Wurster

At the Imperial Palace in Kyoto, completed by 804, rain water from the curving tile roofs is caught by the narrow, precisely cut stone trench which separates halls and galleries from the austere courtyard of raked white sand

Kenneth Kassler



Among the oldest devices for the control of roof water are the narrow stone channels that parallel an outer stairway of the Palace of Minos at Knossos in Crete, built about 1500 B.C. J. S. Pendlebury, the archaeologist, says that splash was avoided at the turns by leading the water down in "a series of small waterfalls; at the bottom of each it was checked, with the result that it reached the corner at only half-speed and turned it without spilling a drop." The square pool is a sediment basin



Catherine Bauer Wurster

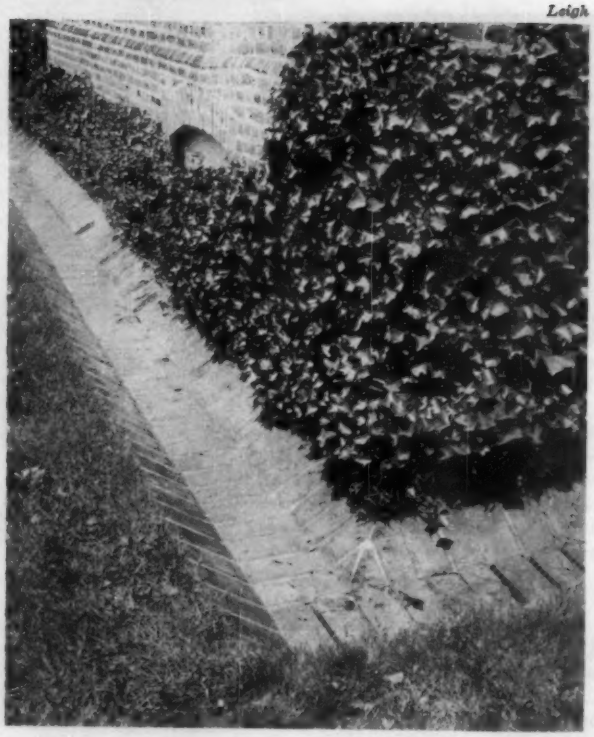
Again, the Imperial Palace at Kyoto. After a rain, roof water still runs in the narrow stone trenches that form, as Arthur Drexler observed, "a sharp line of demarcation between buildings and garden no less effective than a podium"



Museum of Modern Art

At the Katsura Imperial Villa, completed around 1636, roof water falls without muddy splash into the neat strip of pebbles which surrounds the pavilions as their formal boundary

Leigh



A severe and elegant Colonial precedent is found at the William Trent House in Trenton, New Jersey, built in 1710. Here eaves drip is captured by a sharply outlined red brick trough, set between the lawn and the ivied brick walls of the rectangular building. At each side the trough is convex, sloping down to corner-drains covered with unmortared bricks. In the New Jersey climate, gutterless roofs encourage a fantastic species of architectural ornament—icicles



Robert C. Lautman photos

Three-Part Structure For A Hillside House

The light, hovering quality of this clean-lined, compact house is strongly emphasized by its structural system. Concrete and masonry form foundations and walls for the lower level—a sort of half-basement opening to terraces at the rear. The upper, and main, level has a light wood post-and-beam frame, and is perched above the heavier lower area on wider spans of steel columns and beams. Stained-redwood and glass panels emphasize the regular structure of the upper level. One bay is inset to mark the entrance, where a short bridge further accents the "independence" of the disciplined design from its heavily wooded hillside site.

The carport and private entry to the house are on the lower level, which is on grade with the street. The drive incorporates a parking area from which visitors can approach the house by stepping stones up to the front entrance terrace. All landscaping is kept as natural as possible to preserve the character of the site.

The program for the house required quarters for the owner on the main level, ample facilities for living and entertaining, and a separate bedroom suite with access to the living areas. The scheme as finally developed makes a good plan for a small house that must accommodate a two-unit family—such as a couple with a parent living with them.

Residence for
Miss Muriel Ferris
McLean, Virginia

Charles M. Goodman
Associates, Architects

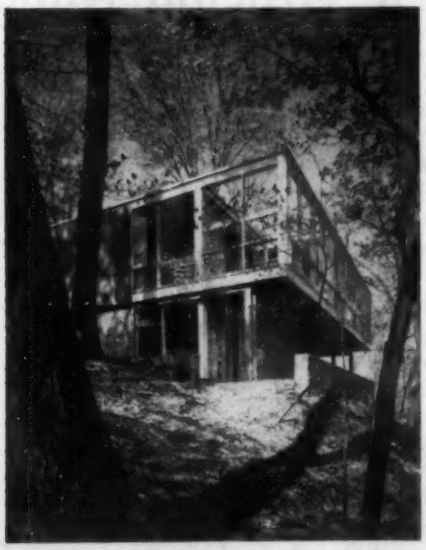
Milton A. Gurewitz,
Structural Engineer

Robert R. Jones,
Mechanical Engineer

Eric Paepcke,
Landscape Architect

Providence Construction Co.,
Contractor

The dining area has a sliding door to kitchen. A pass-through (see plan) serves as buffet or bar to facilitate service



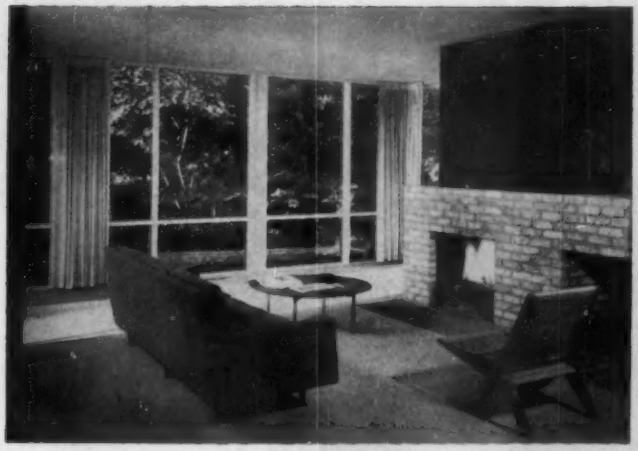
At the rear of the house, upper and lower terraces afford seclusion for each occupant of house to relax outdoors

House in McLean, Virginia

The house packs a great amount of spaciousness into a compact rectangular plan. In contrast to the privacy afforded by banks of high narrow windows in the front, the back walls of all major rooms are almost completely glass, opening rooms to the woodlands. A number of casement units are incorporated in the lower section of the walls for ventilation. The openness, and the neat simplicity of the interiors add much to the sense of space required for entertaining large groups.

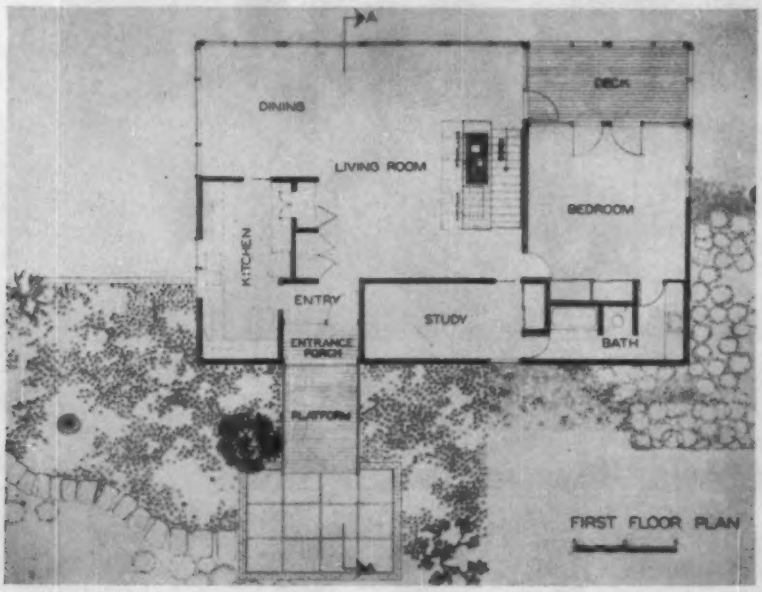
The owner's quarters, on the upper level, form a suite of bedroom, deck, bath-dressing room, and a study. The study doubles as a guest room, and has access to the bath. The suite forms a comfortable retreat when the living areas are in use; this is equally true of the lower-level bedroom, with its adjoining covered terrace.

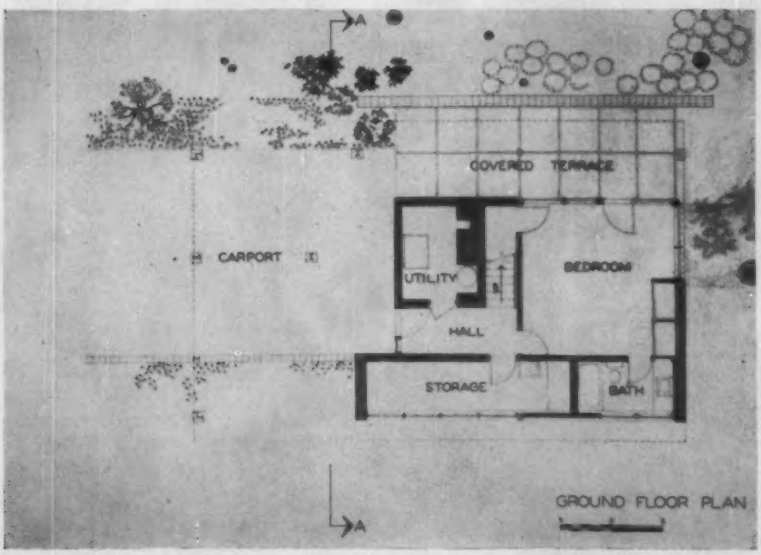
The kitchen is well equipped, has wide counter. The built-in range is electric, sink is stainless steel





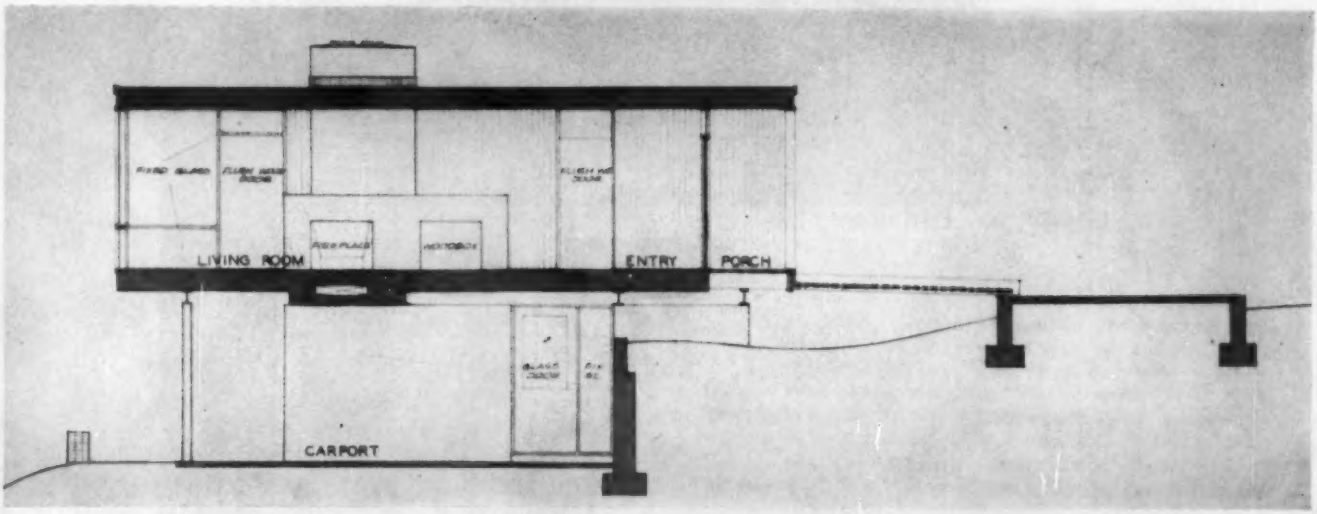
The living-dining area (above left) has walls of cypress and flat-enameled plaster, plaster ceilings. Floors are carpeted. Floors in the master bedroom (above right) are plywood parquet. The house frame continues around the deck, without glazing, to form a trelliswork that could be screened





House in McLean, Virginia





The three major structural elements of the house are clearly visible in the photo and section above: the wooden upper level supported on steel columns above the masonry lower floor. The wood frame of the upper level has posts 8-ft on center; there are six bays front and back, four bays at the sides. The lower steel frame has 16- by 10-ft bays, with a half bay at the front. The redwood siding is backed by glass fiber insulation. The roof is built-up tar and gravel, with copper flashing, aluminum reflective insulation in ceilings. A pump for water supply, electric water heater, and a warm air heating system are located in the lower-level utility room

HOSPITALS

BUILDING TYPES STUDY 262

SURGICAL SUITES

In recent years accepted ideas about planning surgical suites have been suffering some obsolescence. The fabulous surgical procecures of today involve many more people and vastly more equipment. Planning for their smooth functioning, over long, tense hours, is an ever more complicated assignment. For this study ARCHITECTURAL RECORD, in collaboration with *The Modern Hospital*, has assembled a dozen or so plans of most interesting surgical suites, and had them analyzed by architects, surgeons, nurses, administrators and others who have used them. Aaron N. Kiff and Mary Worthen, of Kiff, Colean, Souder & Voss (Office of York & Sawyer) have brought together the material and the comments, and have added their own notes to round out the evaluation.



Planning the Surgical Suite

By Aaron N. Kiff and Mary Worthen, Kiff, Colean, Souder & Voss (Office of York and Sawyer)

The surgical suite of the general hospital is a very complex workshop. It is one of the most important departments of any hospital, and its planning is complicated by the diversities of opinion and experience of the many persons involved in policy decisions essential to development of a good program of requirements.

We say a "program of requirements" rather than "plan." Before any intelligent planning can be done by the architect, there must be a meeting of minds on the size of department; i.e., the number and type of operating rooms and the work methods to be followed in the supportive areas. Administrators, surgeons, anesthetists, surgical nurses, all must participate in the pre-planning analysis of needs and functional methods. The architect must have a wide understanding of various management procedures to be sure that all are discussed in reaching any conclusions with the particular group involved.

The number and type of operating rooms is the first major decision. In the general hospital, the tendency is to have all major operating rooms as nearly identical as possible to facilitate scheduling of various surgical procedures. Free floor space should be 18 ft by 20 ft, or approximately 350 sq ft. Many surgeons and surgical supervisors recommend 20 ft by 20 ft free floor space.

The planning and equipping of each operating room is based on a series of questions, such as: (a) size, (b) usage, (c) environmental control*, (d) lighting—surgical and general illumination*, (e) intercommunications and signal systems*, (f) electronic equipment and monitoring system*, (g) service lines, such as suction, oxygen, nitrous oxide, compressed air, (h) provision for X-ray, not only X-ray tube stand but control, transformer, and necessary lead protection, (i) provision for TV camera, movie cameras, other recording equipment, (j) safety precaution in hazardous areas, (k) cabinet work, supply cabinets and storage for operating table appliances, (l) need for clocks, film illuminators.

The rapid development of cardiac and neuro-surgery is creating a demand for one or more extra-large operating rooms. This type of surgery calls for a larger team of surgeons, nurses and technicians, plus a great deal of extra equipment, such as heart-lung machines, hypothermia equipment, etc.; also electronic devices for measuring bodily functions, i.e., electro-cardiograph, electro-encephalograph, blood pressure, respiration, body temperature, etc. Today many architects are providing an "instrumentation" room adjacent to or between two extra-large operating rooms to accommodate such equipment, which is frequently not explosion-proof. The floor of any such room is usually elevated approximately three ft above the operating room floor. Plate glass panels permit vision into operating rooms, and through-wall conduits accommodate wires and other leads of various appliances in the instrumentation room to the surgical field. Such an area can also house the TV control and monitor (if used), X-ray controls, etc.

In the hospital as a whole, the actual patient area is only a very small per cent of the total. The same is true within the surgical suite. The operating rooms themselves will account for only about one-fourth of the total area required for the suite with its supportive functions such as—

Offices and administration areas, scrub areas, work and supply rooms, laboratory, dark room, post-anesthesia recovery, holding or induction areas, lounge, locker and toilet rooms for various personnel groups, conference or teaching rooms, and circulation within the department.

The analysis of various suites illustrating this article show a spread from 1115 sq ft to 1585 sq ft total gross area per operating or cystoscopic room (if included)—and every suite could use more gross floor area for storage, according to comments. Thus, a suite of eight operating rooms averaging 350 sq ft each $= 2800$ sq ft $\times 4 = 11{,}200$ sq ft estimated total area required—or 1400 sq ft per operating room.

Within the surgical suite we have three basic zones predicated on three types of activity and circulation involved, and the degree of sterility to be maintained. The pre-planning analysis of these areas is just as important as the determination of the number and type of operating rooms.

Outer zone—Administrative elements and basic control where personnel enter the department, patients are received and held or sent to proper holding areas of inner zone; conference, classroom areas, locker spaces, any outpatient reception, etc.

Intermediate zone—Predominantly work and storage areas; outside personnel will deliver to this area but should not penetrate the inner zone. The recovery suite, if completely integrated with the surgical suite, is an intermediate or outer zone activity.

Inner zone—The actual operating rooms, the scrub areas, the patient holding or induction areas. All alien traffic should be eliminated. Here we want to maintain the highest level of cleanliness and aseptic conditions.

Outer zone administrative areas have increased in importance. Offices are needed for the surgical supervisor, the clerks who manage scheduling and pa-

* These subjects have so many ramifications they are only mentioned here.

per work, the clinical instructor (particularly if there is a school of nursing), possibly the chief of staff. There must be provision for surgeons to dictate medical records.

And don't forget the patient. After all, he is the primary concern. Who is responsible for his transportation to the surgical suite, and on whose bed or stretcher? How is he checked in and where does he wait if the room for which he is scheduled is not ready? Who has not seen surgical corridors lined with occupied stretchers for want of adequate holding, preparation or induction areas? Another factor is added if any ambulant outpatient work is to be done. There must be provision for receiving, controlled waiting, dressing rooms and toilets.

A variety of persons must be provided with lounge, locker and toilet space—surgeons (male and female), nurses, technicians, aides, orderlies. Coffee and cola seem to lubricate the entire department; some systematic provision for their supply is warranted.

A conference or classroom for departmental meetings and in-service training programs is easily justified.

The access to all these areas should be removed from strictly surgical areas, as people are entering and leaving in street clothes and should not penetrate into other zones until after changing shoes and clothing.

The planning and equipping of the intermediate zone is based on the method of processing and storing of the thousands of items involved. It is fairly common practice for the central sterile supply department, elsewhere in the hospital, to be responsible for the preparation and autoclaving of all surgical linen packs, gloves, syringes, needles, and external fluids. The storage of these items to be used in surgery becomes the responsibility of the surgical department and adequate space must be provided for a predetermined level of inventory.

The method of processing surgical instruments has been the subject of various research projects, notably at the University of Pittsburgh (see *The Modern Hospital*, November 1955). The new ultrasonic cleaning equipment is eliminating a time-consuming, laborious process. The cost of the equipment discourages duplication and encourages the consolidation of work areas where lay personnel can be trained under close supervision to carry out approved processing techniques.**

The method of packing and sterilizing instruments and utensils will determine the size, type and location of autoclaves needed. Consideration must be given to inclusion of an ethylene oxide sterilizer for cystoscopes, bronchoscopes and delicate surgical instruments which cannot be sterilized by steam or high temperatures. How and where instruments will be stored is another decision to be made.

Suitable storage space must be provided for: (a) clean surgical supplies such as extra linen, tape, bandage materials, etc.; (b) parenteral solutions, external fluids or sterile water; (c) essential drugs and narcotics; (d) blood supplies, bone bank, tissue bank, eye bank, etc.; (e) radium and isotopes used in surgery.

It seems impossible to provide adequate centralized garage-type spaces for bulky equipment not in constant use. Dr. Carl Walter has estimated that an average of 80 sq ft per operating room is needed.

The intermediate zone also houses the facilities for handling waste, soiled linen, etc., and janitorial equipment for routine housekeeping.

The anesthesia service cannot be shortchanged. It may spread over all zones of the surgical suite. Office space is required, work and storage space for equipment. And most important is the decision on where induction of the patient is to take place: centrally to all rooms, locally in induction areas (sometimes referred to as preparation or holding rooms) or in the operating room proper. There are acknowledged hazards in moving anesthetized patients and equipment. Induction areas should permit quicker turnover in operating room usage, but they also require more anesthetists and nurses to administer.***

The post-anesthesia recovery room has become an integral part of the surgical suite in most cases. The size will vary from one-and-a-half to two beds per operating room. There is a close relationship between the anesthesia department and the recovery room.

Any frozen section laboratory should be located near the entrance of the surgical suite so that laboratory personnel need not penetrate the inner zone.

Any dark room facilities should be located to serve those rooms generating greatest load of film, normally the cystoscopic, urological and orthopedic services. It should be accessible from a corridor to prevent alien traffic through any operating room.

Inner zone planning includes the operating rooms and their essential supportive elements. Decisions must be made on the type of scrub-up sinks or troughs and their location providing minimum travel to the operating room to eliminate chance of contamination after scrub procedure.

The need for local "sub-sterilizing" rooms is being questioned by many authorities. The trend toward centralization of work areas and sterilizing equipment, and the changing techniques of instrument packaging are reducing the importance of the sub-sterilizing area. Circulation travel distance and work patterns are factors determining the need for decentralized work areas. When such areas are provided there should be staff access for servicing and

** Long Island Jewish Hospital and University of California Hospital illustrate a large work area centrally located to serve all the operating rooms.

*** Experience with various suites indicates that what was planned for induction frequently is converted to other causes. (See Grace-New Haven Hospital, Moffitt Hospital of University of California, Rhode Island Hospital.)

stocking them without going through an operating room.

The program of need dictates the gross area required for the surgical suite. Recent developments indicate that more efficient departments with minimum travel distances can be planned in bulk, squarish areas. This tendency has affected the location of the surgical suite in relationship to the hospital as a whole. The suite has come downstairs to a lower floor where it is more possible to spread out and achieve the desired shape, divorced from the usually narrow structural pattern of a nursing unit. Planning within the squarish areas has been made possible with the parallel development of air conditioning and artificial lighting. Dependence upon windows for ventilation and light is a thing of the past. The optimum conditions of temperature, humidity, and light level can be controlled by mechanical means far better than by nature.

The surgical suite location must mesh with the total circulation pattern so that patients can be moved to and from surgery with a minimum of travel through other hospital services. Its location is also affected by its close relationship to three other major hospital services—the X-ray department, the clinical laboratories, and the central sterile supply.

One other important factor in the location of the surgical suite is the future. Expansion! Anticipate ways and means to permit growth in an orderly fashion without upsetting basic relationship of internal organization—or without extending lines of travel to unacceptable or uneconomical lengths.

HARLAN MEMORIAL HOSPITAL, KENTUCKY, Miners Memorial Hospital Association

MEDICAL BACKGROUND

From John C. Blankenbeckler, Acting Hospital Administrator: "As originally designed, there was inadequate space for the anesthetists to perform their cleaning, storage and general care of their instruments and equipment. However, this has been remedied by enclosing part of the recovery room with a glass wall adjacent to the corridor. This room can be entered directly by the first door on the left as you enter the operating room corridor, or by entering through the recovery room itself.

" 'Harlan Memorial Hospital has the best spatial organization of facilities I have seen, and I have no constructive suggestions in that regard.' I am quoting Dr. W. H. Potter, Chief of Surgical Service.

"The four operating rooms should have an electrical circuit so that the portable X-ray unit could be plugged in within the operating room and eliminate an extension cord being run to the corridor. This could be handled by using the electrical panel which is installed in the corner of each room. This cord poses a safety hazard to the operating room personnel.

"The instrument room is used to capacity and possibly 40 per cent more space could be used, if available, for a more ideal arrangement. However, installation of additional instrument poles would solve this problem for all practical purposes.

"All concerned agree wholeheartedly that the arrangement of the operating room, its location being proximal to the cystoscopy room, fracture room, emergency room and the radiology department, are assets to the operating of the department.

"The safety panel mentioned above has many good points. With all electrical cords running to one location, both the patient and the personnel are much safer. The automatic monitor is excellent and contributes much toward the safety of the patient and also, actually and psychologically, to that of the operating room personnel.

"Space for instrument cleaning and autoclaving is very adequate.

"Dr. Potter also commented that an adequate area for pre-operative patients, not so close to the recovery room and more private, could have been provided."

COMMENT

"1. Little storage space within department, but system of supply eliminates need for a great deal, as all basic supplies are just across corridor. Very little storage space for extra equipment, fracture and orthopedic rooms.

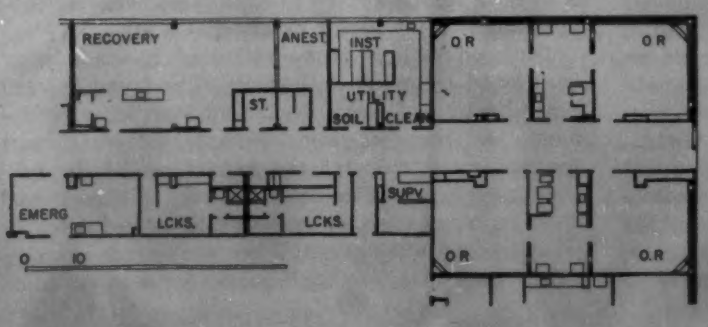
"2. X-ray department adjacent, containing fracture and cystoscopy room, plus developing facilities; portable X-ray used as required in operating rooms.

"3. Relationship to lab remote; no local tissue or frozen section facilities.

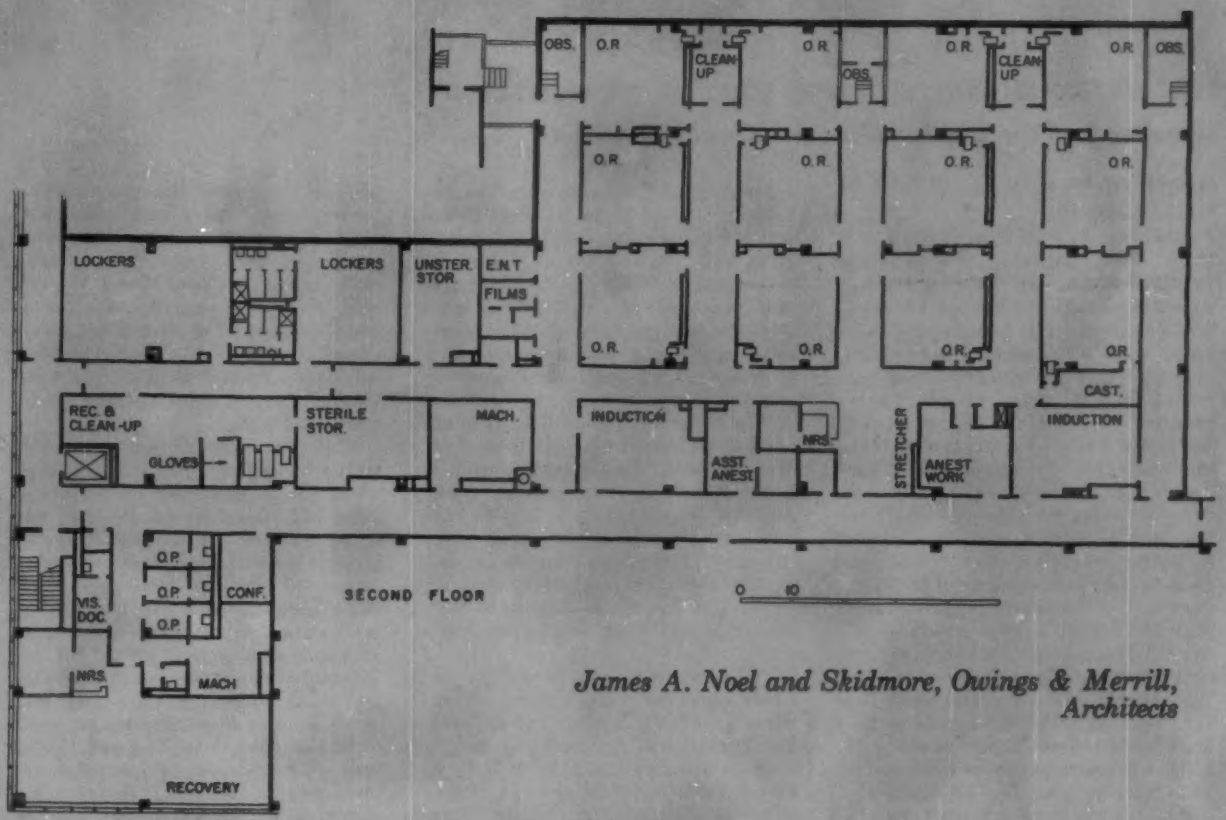
"4. Good relationship of emergency facilities to operating rooms and X-ray department.

"5. Note elimination of doors whenever practical, and local building and fire laws permit. Good, as doors are always in the way, particularly where heavy supply line exists within department and where privacy is not essential.

"6. The pre-operative patient will be left in the corridor until room is ready, unless there is very good scheduling."



Sherlock, Smith & Adams, Architects



James A. Noel and Skidmore, Owings & Merrill, Architects

TEMPLE UNIVERSITY MEDICAL CENTER, PHILADELPHIA

ARCHITECTURAL BACKGROUND

From Harold H. Olson, Project Manager: "The planning of the surgical suite at Temple University Hospital was unusually successful because the architects were able to get more exact program information from the staff than was obtainable for any other area of the hospital, and therefore the problem was more fully understood and a plan was developed that fitted these particular needs.

"Being a teaching hospital, the pattern of traffic within the surgical suite must provide easy access and circulation for the department head and other faculty members among the 12 operating rooms. It must also allow easy access for large groups of students and other visitors. Neither of these special traffic patterns should interfere with the normal passage of the patient into and out of the surgical suite, nor should the patient even be aware of their existence.

"Efforts were made to keep every operating room alike in order to achieve maximum flexibility in their use; however, various branches of surgery required making special provision in a few of the rooms. Thus we have one shielded room equipped for electro-encephalography, two rooms equipped for television, one with an observation gallery, and one equipped for orthopedic surgery.

"A square windowless building, instead of a more conventional form with normal fenestration, allowed the development of this unusual plan which meets the special requirements of this institution. All rooms are air conditioned and artificially lighted, making it possible to perform all types of surgical procedures without regard to light-proof shades or the problems normally incurred in rooms with windows."

COMMENT

"1. Good segregation of patient travel and staff travel.

"2. Induction rooms make good receiving patient-holding area. Assume attendant with patient must check at 'clerk' to know which induction area is to be used. Some backtracking from induction rooms to center six operating rooms. Moving table and anesthetizing equipment the distance involved seems hazardous, though anesthetists have two schools of thought on the subject.

"3. High-speed instrument autoclaves *within* each room is rather unusual. Would seem that three or four in each substerilizing area serving six rooms would have been adequate. Also would eliminate small heating element from operating room.

"4. Conference room seems small for teaching hospital.

"5. Staff lockers located for pretty good segregation.

"6. Rather unusual to find separate work room geared to take care of surgical pack work which more usually is handled in central sterile.

"7. Good to see some provision for outpatients, but think location—so far removed from control point center of surgical suite—unfortunate."

THE NATIONAL INSTITUTES OF HEALTH, BETHESDA, MD.

Operating Facilities, Cardiovascular and Neurological Surgery*

ARCHITECTURAL BACKGROUND

From John W. Franklin, of the architects' office, outlining the program requirements: "1. Two operating rooms for heart surgery and two operating rooms for neurological surgery, with all necessary supporting areas, to comprise two physically separated surgical suites, with each serving having complete and independent staffs. 2. Isolated location to eliminate all traffic by unauthorized personnel and visitors, and having convenient access to nursing units, central sterile supply and blood bank. 3. Large operating rooms to accommodate the many equipment items required for the various procedures, plus 18-20 people, plus provision for use of heart-lung machine and hypothermia. 4. If possible, one central recording room for instrumentation for each suite with operating and anesthesia rooms, X-ray and catheterization laboratory grouped around it, avoiding the need for duplication of costly instruments for each recording room, or for moving sensitive electronic equipment from one to the other, risking possible damage. 5. Close relationship between other supporting spaces such as laboratories, dark rooms, heart-lung laboratory, instrument clean-up, sterilizing rooms, work room, recovery room, anesthesia work room and lab, with operating rooms. 6. Observation facilities for visitors and staff. 7. Adequate provision for personnel, including locker rooms, briefing rooms and rest rooms. 8. Extensive means of communication—physical, mechanical and visual—between various areas. 9. Best possible lighting and bacteria-free air, with special attention to methods of air handling. 10. Space for staff consultation and training. 11. Elimination of undesirable wiring and tubing running across floor of operating rooms—more of a problem than normally because of the use of such equipment as the heart-lung machine, hypothermia, EEG, EKG, oscilloscopes, cautery, gas analyses, respirator, defibrillator, anesthograph, blood withdrawal unit with photoelectric cell, and, in addition, the necessary tubing for air, vacuum, oxygen and nitrous oxide. 12. Provision for still and motion picture photography and television.

"The circular scheme, rather than a number of rectangular schemes studied, with a central recording cylinder and patient areas on the periphery, proved to be the most direct and logical solution of the problem, from both the functional and structural aspects. With the framing system employed, it also was the most flexible for possible future rearrangement, as there are columns only at the edge of the recording circle and the inside face of the corridor.

"On the neurological floor, the operating table will be located on a radius so that the patient's head is about 7 ft from the recording room. As effective observation in this case must be directly behind and above the head of the operating table, and as few observers will be invited for direct viewing, it was decided to combine the recording and observation area.

"The entire structure will be air conditioned. In the operating rooms, to reduce air turbulence, radiant cooling panels will be installed in the walls supplementing the conditioned air. Studies have proven that tubulence in otherwise clean air introduced into a room quickly picks up and suspends in the clean air many bacteria from the floors, equipment and clothing in the room. As the cleanest air is the freshly filtered incoming supply, it is planned to bathe the operating field with it, thereby pushing aside air which has been in contact with floors, people, drapes.

MEDICAL BACKGROUND

From Jack Masur, M.D., Assistant Surgeon General and Director, Clinical Center: "The two major factors which led to the decision to construct a new wing to accommodate the research teams in neurosurgery and cardiac surgery were: 1, increasing number and complexity of recording apparatus, and 2, increasing number of specialists and technicians engaged in the surgical procedures, in the room and around the operating table. The present array of electronic devices and other recording apparatus in the modern operating room is impressive, but a look-see at what is going on in the nearby laboratories reveals that the best is yet to come. Moreover, the requirements of present-day anesthesiology and the utilization of hypothermia and oxygenators all add up to more men and more machines to be considered in the design and operational approach.

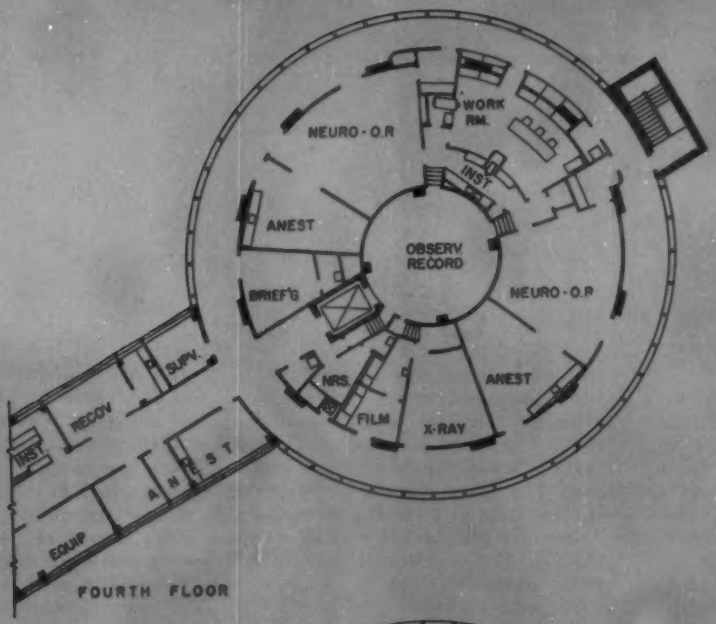
"The recrudescence of the problems of infections reminds us sharply that our much vaunted 'conquest' is not yet complete. In neurosurgery particularly, where one deals with vital tissues that are utterly destroyed by infection, this is an especially crucial problem. Thus, the current debate about recirculation of conditioned air in operating rooms seems futile—rather we ought to be learning a good deal more about setting up stricter specifications for the *quality* of air.

"The presence of so much electronic equipment will call for more attention to improved techniques of shielding; the larger number of persons involved in complex surgical procedures will necessitate the adaptation of flexible intercommunications arrangements; in a period of innovation with more complicated surgical approaches, space for the briefing of the teams is required; the increased length of time that staff is working in operating rooms needs to be reckoned with; the real usefulness of television (close-range and long-range) for true instructional purposes has not yet found clear expression; the proper channeling of all the 'spaghetti' running across the floor is yet to be solved; et cetera, et cetera."

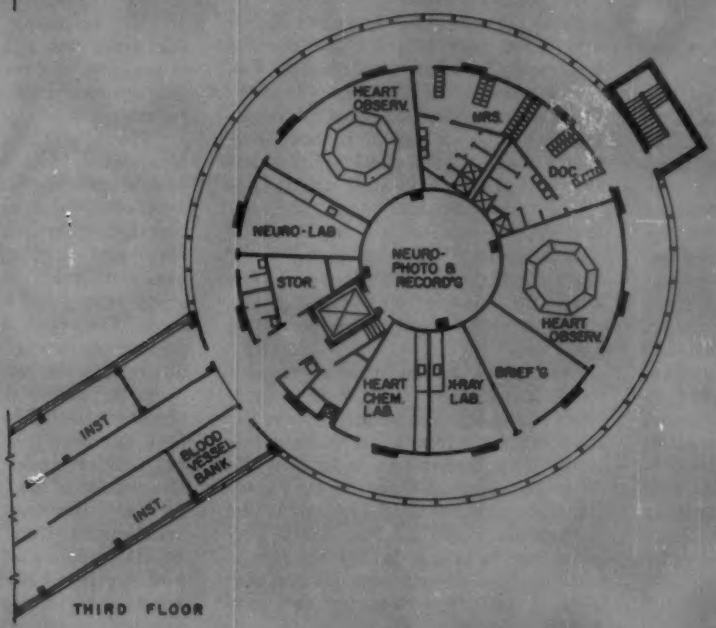
From E. K. Day, Chief, Research Facilities Branch, Division of Research Services, Public Health Service: "The building makes possible the contingence of the operating suite elements in a circular pattern, yet provides one direct and compact instrumentation space contiguous to all of the operating areas. This convenient functional and economical arrangement, from the viewpoint of equipment use, however, requires the sacrifice of additional space since it necessitates a peripheral corridor which occupies almost one-third of the floor area.

"There are other advantages and disadvantages for cardiac surgery, since the bulk of the equipment is concentrated in the wide portion of the room where the patient's head is located. On the other hand, in the neurosurgery room, the patient's head must be located close to the recording area. The resulting concentration of machinery in the narrow portion of the room may be undesirable. Also, the shape of the building necessitates polygonal walls of relatively short spans, which present difficulties in placing of equipment adjacent thereto."

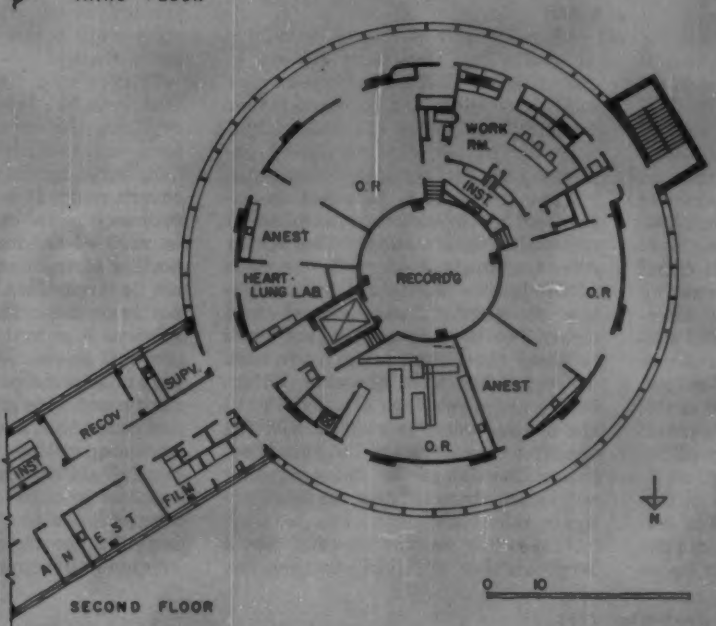
* Under construction; no administrative comment possible.



FOURTH FLOOR



THIRD FLOOR



SECOND FLOOR

Kiff, Colean, Voss & Souder, The Office of York & Sawyer, Architects

RHODE ISLAND HOSPITAL, PROVIDENCE

ARCHITECTURAL BACKGROUND

From Henry R. Shepley, architect: "The layout is not unusual, but was worked out with great care. A few of its features are: 1. A 24-hour special nursing unit on the floor immediately above surgery fulfills some of the recovery functions, which permits a considerably smaller than average recovery room on the surgical floor. 2. The scrub and sterilizing rooms between the operating rooms replace the conventional pattern of two separate rooms. 3. The bed garage at each end of the central core saves clutter in the corridors. 4. Operating Room No. 12 is fully equipped for X-ray.

"There are certain built-in features in the way of equipment which are quite interesting: 1. The doors between the scrub-sterilizing rooms and the operating rooms are equipped with power-operated 'magic' hardware. 2. The scrub sink faucets are operated by electronically controlled temperature and humidity recording devices. 4. The intercom and emergency call systems between operating rooms and control desk are quite elaborate. 5. Operating Room No. 1 is equipped for closed circuit built-in television broadcasting to the classroom on the same floor and the main hospital auditorium."

MEDICAL BACKGROUND

From Dorothy L. Morrison, R.N., and Meyer Saklad, M.D.: "The operating room suite in this general hospital of 659 beds was designed to care for about 12,000-14,000 surgical procedures yearly. On the operating corridor are 14 operating rooms. In general, their use is as follows: one gynecologic, one genito-urinary, two cystoscopy, two orthopedic, one nose and throat, one alternating nose and throat and dental, one alternating eye and general surgery, one alternating neurosurgery and general surgery, three general surgery and one special function room. All the rooms, with the exception of the two cystoscopy rooms, may serve as general duty rooms, and are not reserved for the indicated service entirely.

"The special function room in this corridor requires comment. The patient in the operating room requiring X-rays should be able to be so studied by whatever heavy duty X-ray apparatus is required. We believe strongly that all anesthetized patients should be X-rayed on the operating room corridor for safety's sake. The prime purpose of this room is for operative procedures requiring X-ray procedures not readily available in the cystoscopic and orthopedic rooms.

"It may be noted that the North corridor is separated from the South and West corridors by the control desk and the bank of elevators. Patients come down the bank of elevators which face the control desk. Here they are checked in and then they are sent to the corridor in which they are to be operated upon. One of the three elevators facing the control desk is staffed by an attendant who is subject to telephone call from the control desk. He is thus always available to serve the operating corridors in case the other two elevators are busy.

"Centrally located in the North and West wings are anesthesia rooms. They serve as distribution centers for anesthesia equipment in these corridors. The anesthesia room in the West corridor also serves as an induction room for tonsillectomies. The anesthesia room in the South corridor serves as a room for the preparation of anesthesia supplies and also as a distribution area for this corridor.

"Considerable effort was expended to obtain two important factors in operating room illumination—proper intensity of light and its correct color temperature. These are *both* necessary for proper observation of patients and for working conditions.

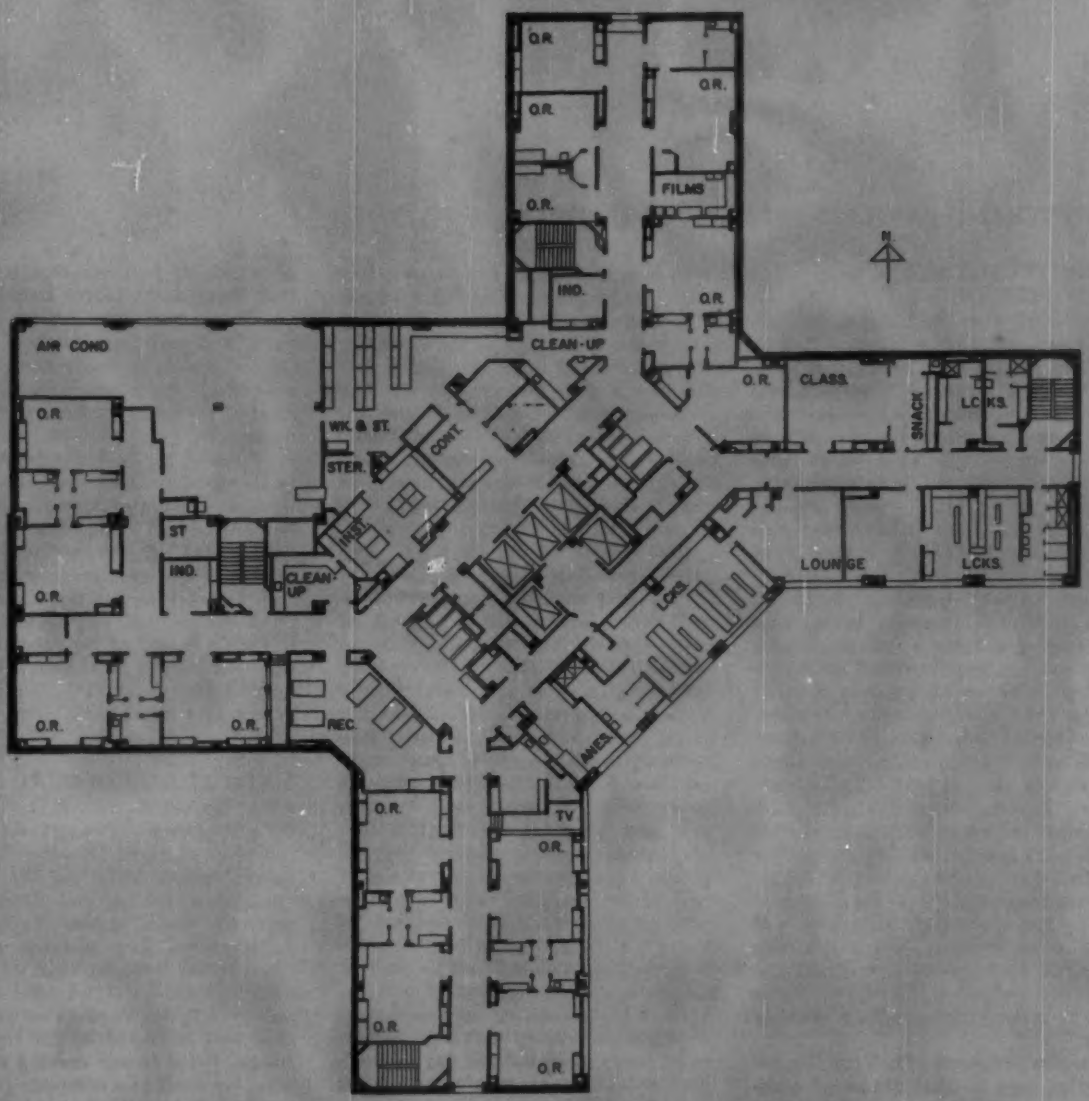
"The intensity is obtained by incorporating a sufficient number of units of proper wattage. The proper color temperature—actually the color of the light—is obtained by combining fluorescent and incandescent light. The incandescent lights serve to lower the Kelvin temperature and are controlled by a rheostat. Kelvin temperature readings are taken until the desired color is reached and the rheostat then locked in position. When the lamps in the operating rooms are changed, new readings are again taken.

"Inasmuch as this hospital has a large number of night emergencies, all such procedures are concentrated in the South corridor for the purpose of efficiency. The reason is two-fold: 1, this corridor is adjacent to the recovery room, and 2, the operating rooms in this corridor are so placed that a minimum number of personnel can supervise several operating rooms at a given time. There is a telephone extension at the end of the corridor common to that of the desk, so that incoming calls can be handled from either position. This makes it possible to function at night with less personnel than would ordinarily be the case.

"The operating rooms are divided into pairs, with a scrub room between each two rooms, with the exception of the operating rooms in the North corridor. Here one combination scrub and sterilizing room serves the genito-urinary room, the two cystoscopy rooms and the special function room. The scrub rooms between each pair of operating rooms have worked out extremely well. There is enough room for either five or six people at the same time. The sinks are of stainless steel and are built with a slanting portion under the faucet so that the water is less likely to splash.

"The instrument scrub room is so constructed that the dirty instruments come in one end, are cleaned and processed and passed through a window to the central instrument storage room. In this instrument scrub room soiled sponges and debris are discarded.

"Experience has demonstrated that with but few but important exceptions, the operating corridor has worked out very well. A serious weakness is the inadequate size of our recovery room. It had been hoped that inasmuch as the special care unit was in such close proximity to the operating room, the recovery room need not be large. This, unfortunately, has not been the case, and the recovery room as it now stands does not meet our full needs. The volume of surgery (up to 62 per day) and the severity and type of surgery have necessitated that many patients remain on the operating room floor to await the full stabilization of their cardiovascular systems. We have on occasion crowded as many as 13 patients into the recovery room, which was originally designed for five.



Shepley, Bulfinch, Richardson & Abbott, Architects

"The South and West operating corridors, with the recovery room at their junction, are models of efficiency. It is unfortunate that the North corridor is located at such a distance from the center of activity.

"In the planning stage, thought was given to the placement of equipment. With the advent of new procedures, requiring much in the way of large equipment, as monitors, pressure breathing devices, hypothermic equipment and heart-lung machines, we find ourselves bulging at the seams. We strongly suggest that in new construction there be made generous provision for storage space. The use of equipment as enumerated above makes it imperative that in a hospital the size of ours, doing the type of surgery we do, there be at least two rooms 1.5 times as large as any we have.

COMMENT

"1. Zoning excellent, though certain amount of back-tracking for staff to control point if they enter from opposite side elevators.

"2. The two clean-up areas, work and instrument room could have been consolidated, with savings in equipment and possibly in personnel, with better supervision.

"3. Usual problem of extra equipment storage.

"5. Operating rooms seem to have excessive cabinet space; questionable if it is good policy to store so much in operating rooms.

"6. Classroom-snack bar excellent idea.

"7. Glad to see the usually forgotten orderlies and aides given locker rooms."

STUYVESANT PAVILION, ST. LUKE'S HOSPITAL, NEW YORK

ARCHITECTURAL BACKGROUND

From Kiff, Colean, Voss & Souder, architects: on the program—"1. Extension of existing operating suite of 10 rooms in general voluntary hospital of 523 beds. 2. To provide five new operating rooms for general and special surgery. 3. To provide common instrument and work room suite to serve five new operating rooms; all surgical packs will have been prepared and autoclaved in central sterile supply. 4. Nurses' and surgeons' locker rooms, teaching facilities, post-anesthesia recovery room, etc., existing elsewhere on floor serving existing and new surgical suites. 5. Two of new operating rooms to be larger than standard rooms for special surgical techniques involving extensive instrumentation, and large number of persons on team; i.e., surgeons, nurses, technicians. 6. Holding areas to serve as anesthesia induction rooms or waiting space for patient out of corridor circulation. 7. Surgeons wanted windows, even if small, for eye relief. Sills are 4 ft 6 in. from floor. 8. Not a teaching hospital, so no need for direct observation galleries; TV on closed circuit to large lecture hall on another floor."

On site problems: "1. Very limited building site so that shape of addition was governed by surrounding existing buildings, building code restrictions, etc. 2. Access from existing building limited to two: one for general patient approach and one to balance of floor and related services. 3. All agreed that corridor access for patients to operating rooms should have been around perimeter, so operating rooms could have direct access to central work area, but limitations of structure did not permit."

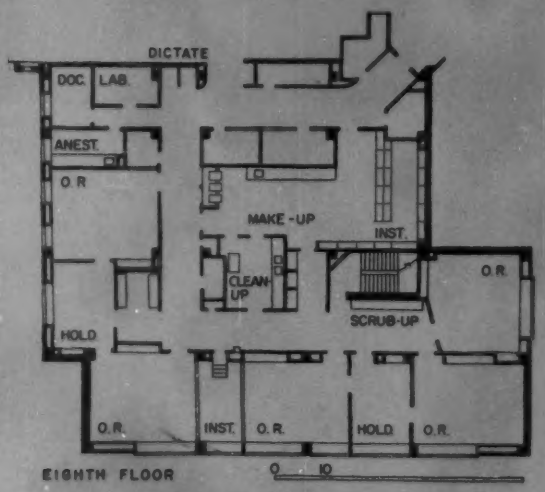
On special equipment: "1. Two large operating rooms equipped for TV, ceiling mounted X-ray tube, hypothermia, conduits from instrument control room for various leads of ECG, EEG, blood pressure, body temperature, etc. 2. Electric-controlled light-proofed shades in operating rooms. 3. Built-in X-ray illuminators, clocks, stainless steel supply cabinet. 4. Stainless steel scrub-up troughs—as it turned out, too narrow and heads too close together, inadequate elbow room; also proved to be very noisy—like drum—and had to be insulated with sound-absorbing material; had problem of water on floor from elbow drip as troughs too shallow front to back. 5. Common work room with all sterilizers for instruments in one location; wrapped autoclaved standard instrument trays prepared for day's schedule; special instruments autoclaved as required; room planned with idea that instrument tables from operating rooms would be set up in work room and sufficient number of such tables in use, so ready to move into operating room as soon as room cleaned up after each case. 6. Piped gases, oxygen, nitrous oxide and compressed air in-drops from ceiling in two locations; two vacuum-suction lines wall-mounted in each operating room. 7. Small dark room for developing; small frozen section lab with provision for refrigerator for blood and deep-freeze for bone and tissue bank. 8. Conductive ceramic tile floor. 9. Recess in ceiling for surgical lights was necessary because of existing floor-to-floor heights, structural beams and duct work."

MEDICAL BACKGROUND

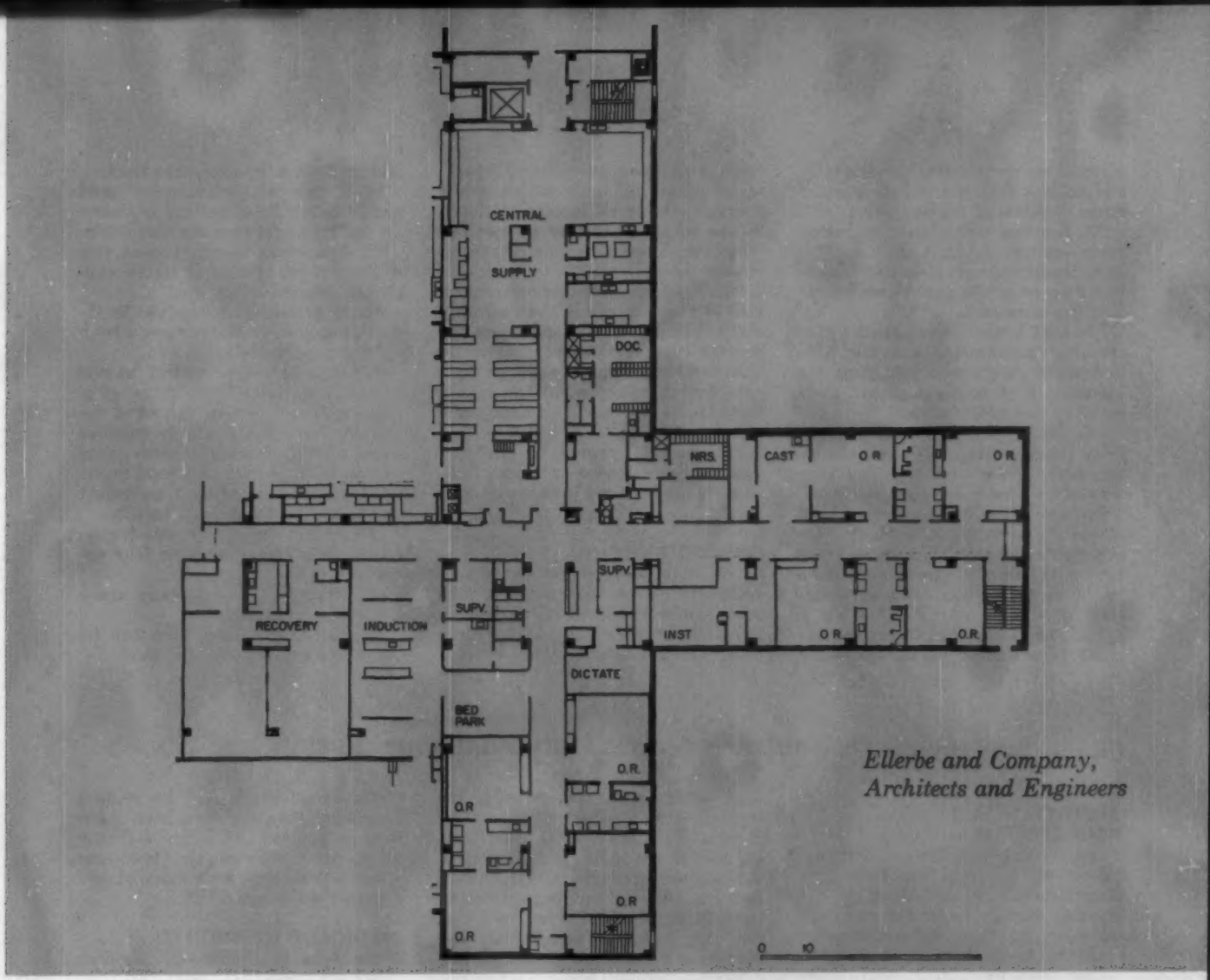
From Harold A. Zintel, M.D., Director of Surgery: "The general operating room size and the size of the ancillary rooms, including the hold or anesthesia rooms and the central make-up room, appear to be quite satisfactory. The general make-up room is not used entirely as we had anticipated . . . it was our original idea that tables be made up here, covered and delivered to the individual rooms. Prior to our moving into this area, we went to a complete pack system, whereby all of the drapes and instruments are prepared, the drapes in the laundry room and the instruments in the operating room, and sterilized in the very large autoclaves in the central supply. These are stored temporarily on the very adequate shelving of the central make-up area and here they are disbursed to the individual operating rooms. The autoclaves of the make-up room are used mainly for sterilizing individual instruments of a specific nature not included in one of the regular packs.

"We have had some difficulty with the scrub sinks in that there was considerable noise and splashing. Although we had requested a stainless steel trough and inner dimensions are very similar to those of the porcelain sinks in the Lyle operating room, we ended up with troughs which were considerably narrowed and more shallow.

"The instrument storage room with the adjustable peg bars and shelves has been very satisfactory as far as I know."



Kiff, Colean, Voss & Souder, Office of York & Sawyer, Architects



OCHSNER FOUNDATION HOSPITAL, NEW ORLEANS

ARCHITECTURAL BACKGROUND

From Edwin Larson, Ellerbe and Company: "1. The Surgical suite in this instance consists of eight major operating rooms; except for some special features incorporated in the orthopedic operating room, all operating rooms are identical in layout and equipment. In this layout we have incorporated the conventional scrub-up and utility area between each pair of operating rooms.

"2. The hospital has central instrument cleaning and sterilizing for the operating room, with all other sterilizing and pack work for operating room done in central supply, which is adjacent to surgery and has a direct connection to surgery.

"3. This layout incorporates a centralized pre-induction area which makes for more efficient use of the operating rooms.

"4. We have an unusually large post-operation recovery room. Its capacity is 16 beds with two special alcoves for possible terminal cases. These alcoves have direct access from the corridor for relatives. This post-operation recovery room is operated 24 hours a day.

"5. One special feature that the owners feel very valuable is the hostess lounge adjacent to surgery. Relatives of patients undergoing surgery are brought to this lounge. There is a nurse in constant attendance in this lounge who can talk to relatives and allay their fears and so forth. There is a coffee bar in this area also. After the surgeon has completed the operation, he comes into this room and is able immediately to inform the relatives of the condition of the patient and the success of the operation. There are two private cubicles in this area for such consultation. The owners feel that this room is invaluable from the public relations standpoint.

"6. The expansion of this surgical layout is planned to go horizontally and provisions have been made for such expansion; however, we are in the process of adding additional beds to this institution, in fact, about doubling or tripling the capacity. In spite of the fact that a very large proportion of work in this institution is surgical, the efficiency is such that the owners do not feel it is necessary to add operating rooms at this time; however, if it does become necessary, it will not be difficult and can be accomplished without interrupting the existing operation of the surgical suite."

MEDICAL BACKGROUND

From Edward H. Leveroos, M.D., Director: "1. Patients are anesthetized in an area outside the operating room

suite on an operating table; the table and patient are then moved into the room designated for surgery.

"2. Storage space for operating room equipment is not adequate. We have incorporated plans for additional space in the next phase of our building program.

"3. Ultrasonic equipment for cleaning instruments has not been purchased. We are considering the installation of such equipment, however, in the near future.

"4. Dirty instruments are brought from the operating room into the instrument room where they are washed by a maid and then sterilized. They are then dried, checked and placed in instrument cabinets. Instruments for the following day are set up in pans, wrapped and taken to the central supply room for autoclaving.

"5. The following X-ray equipment is available in the operating room area: one 15-milliamp sparkproof diagnostic unit which, while portable, is for all intents stationed in one of the operating rooms; one 30-milliamp portable unit in the recovery room.

"6. There is considerable congestion at the entrance to the operating suite, with traffic to and from the central supply room as well as to the operating room suite proper. This aspect of the planning of the area is undesirable and would be changed if it were feasible to do so.

"In general, however, the staff, operating room nurses and anesthesiologists are satisfied with the present layout."

COMMENT

"1. Though balance of floor is bulk rectangular area, the operating room suite is pretty well confined to limitations of ribbon plan of nursing units over, which does not permit concentration that a squarer area does.

"2. Entrance for surgeons and nurses in middle of patient and service traffic; might produce congestion.

"3. There may be some cross-traffic to issue point of central sterile supply opposite induction area.

"4. If patients are received in induction center, it seems remote from control area for checking in.

"5. Even though central sterile supply is responsible for all surgical pack work, would seem better if the storage for surgical sterile supplies were within operating room suite proper. A lot of back-and-forth movement must be mixed with movement and issue for balance of hospital.

"6. Instrument area seems far removed from one wing with four operating rooms.

"7. Practically no storage space for extra equipment.

"8. Little space for collecting all the waste products, linen, etc."

GRACE–NEW HAVEN COMMUNITY HOSPITAL, MEMORIAL UNIT, NEW HAVEN, CONN.

ARCHITECTURAL BACKGROUND

From the Office of Douglas Orr, architect: "The operating suite was placed on the second floor of the building directly under the mechanical floor, so that air conditioning could be handled with small units rather than through a central system. This provided much greater flexibility, particularly as radiology suite was on the same floor. It may be noted that all services are centralized in the center core area with patient elevators operating independently of staff or public elevators. In passing from the elevator lobby to the operating suite, the control is immediate because of the location of the nurses' station. This gives visual control down both corridors. Supplies coming to this floor from central sterilizing are by dumbwaiter to the supply room, the unloading being automatic.

"It was the intent of the plan that the patient be brought to the operating room in bed, not in a stretcher. All openings and clearances were provided to make this possible. Anesthesia is administered in the anesthesia rooms in the general operating room area. It was planned that the patient be transferred after anesthesia from the bed to the operating table, the bed remaining in the anesthesia room. After the operation, the patient was to be returned directly to his bed, going to the recovery room before returning to the nursing floor. This technique was determined as the most desirable after many conferences and was the established criteria on which the plan was developed. Ambulatory patients arrive on the floor on public elevators, a dressing room being provided from the lobby, and they are then admitted to the operating room suite at the nurses' station.

"The recovery room was provided for nine beds under the supervision of nursing care and with the anesthetist's office adjoining. Recently, an 'intensive care' unit has been designed to which some patients will go after operation, thus providing more efficient service and lightening the load on the regular nursing floor.

"All of the regular facilities such as scrub-up rooms and sterilizing units are provided between each pair of operating rooms with direct access from corridors so they may be reached and supplied without going through the operating room. Locker rooms for nurses and doctors are arranged so they are accessible from the public elevator lobby but also have direct access to the operating suite.

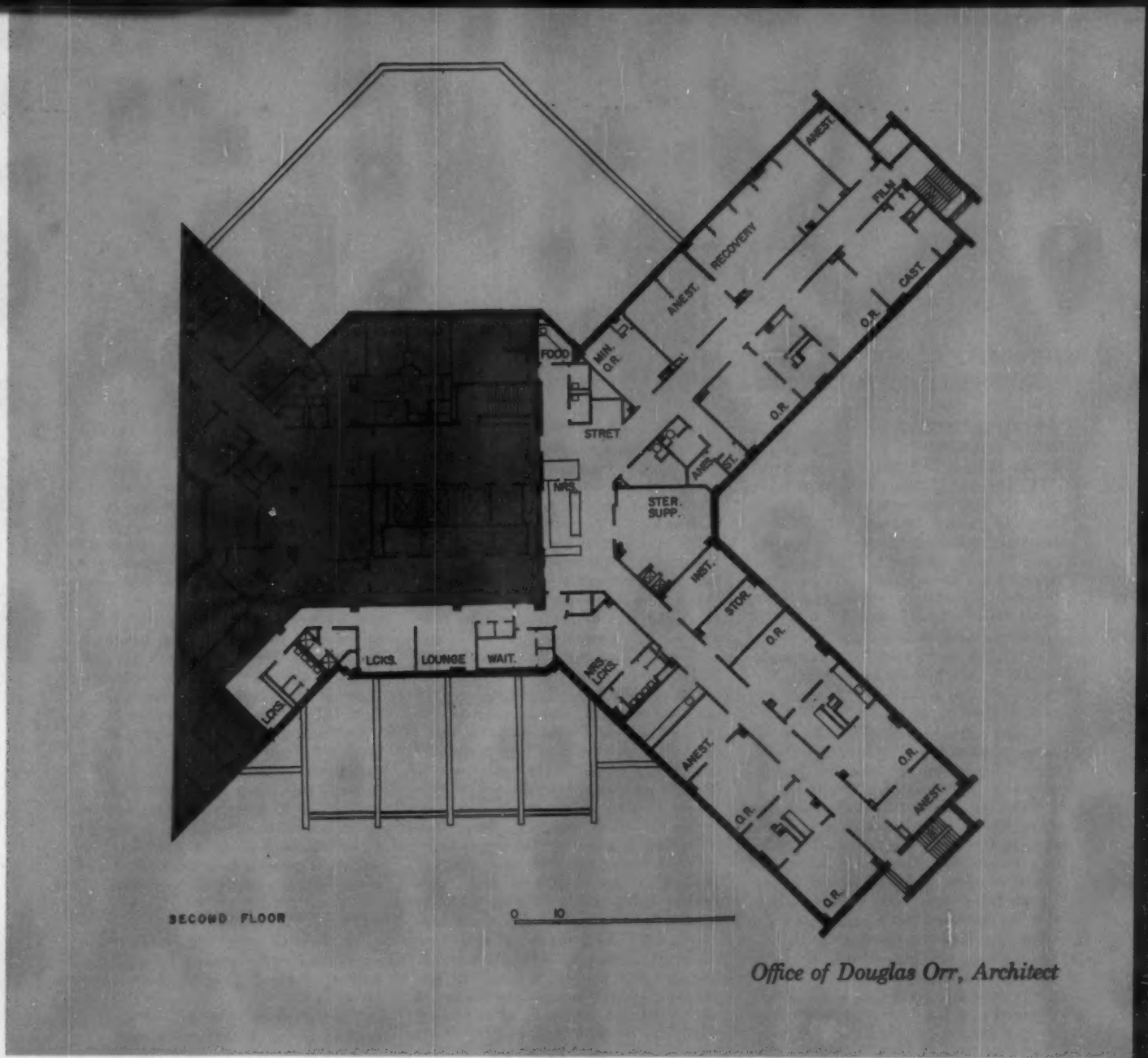
"All instruments are sterilized in the sterilizing rooms adjacent to the operating rooms, where high-speed sterilizers are installed. There is a small food pantry to provide nourishment if needed. A soiled linen sorting area is provided at the linen chute.

"The plan as laid out makes a very flexible arrangement with minimum traffic interference for the various functions. Provision has been made in the structure to enlarge the operating area between the two rear wings behind the core section, should future need require it."

MEDICAL BACKGROUND

From John D. Thompson, Research Associate, Hospital Administration Section, Yale University School of Medicine: "A review of the original plans of the operating room with the present way the spaces are now being used results in a critical appraisal of the suite—which is somewhat valid, though not as objective an evaluation as one would desire. This review reveals a change in the function of three spaces. All of these rooms were designated as 'anesthesia' rooms (induction rooms) and have never been so used. One is now used as another anesthesiologist's office, one is the operating room supervisor's office (she claims she can't work in the 'gold fish bowl') and the other is used as an extra storage room. All other areas are used as indicated on the plans.

"Still another evaluation approach is the opinion of the operating room supervisor as to the design of the unit. Her main criticism is the lack of storage space in the area and the location of the storage cabinets in the operating rooms themselves. They are now on the outside wall, which means that the room has to be entered to replenish them. She sug-



Office of Douglas Orr, Architect

gests lockers in the corridor wall with double doors front and back, so they can be replenished from the corridor. She also complained of the inadequate size of the nurses' locker room. This designation is a misnomer, since maids, EKG technicians, female physicians in pathology and surgery all use this area.

"Some of the less commonly seen good features of the area are the ambulatory patient waiting and dressing area and the arrangement of the cystoscopy suite between X-ray and the operating room. The location of this suite is always difficult, since both services feel the area belongs to them. Its placement between the two services is, I believe, as good a solution to this conundrum as can be attained.

"On the whole, I would say the operating suite in the Memorial Unit is a good example of fitting such an area into a basic shape determined by the needs of the patient floors above it."

COMMENT

"1. Memorial Unit is one portion of a large teaching hospital. Certain special facilities, therefore—cardiac and neurosurgery—are in older buildings.

"2. Though planned for, induction rooms are not used. This seems to be a trend—particularly if operating rooms removed, involving long movement of anesthetized patients. Static hazard even with conduction flooring. Space reverts to other usage.

"3. Good control for checking in patients, but with anesthesia rooms taken for other use, patients must be left in corridor unless excellent organization in timing of patient's arrival in surgical suite.

"4. Local instrument sterilization used instead of central pack.

"5. Perhaps more consolidation of 'utility,' 'instruments' and 'sterile supply' could have saved personnel and given better supervision.

"6. Too bad dark room accessible from plaster room only, unless policy is that all other film goes to main X-ray department, on same floor, for processing.

"7. No provision for laboratory-frozen section.

"8. Classroom and food service—good.

"9. Soiled linen and trash collection—good.

"10. Provision for ambulant outpatients—good."

HERBERT C. MOFFITT HOSPITAL, UNIVERSITY OF CALIFORNIA MEDICAL CENTER, SAN FRANCISCO

ARCHITECTURAL BACKGROUND

From Milton T. Pfleuger, architect: "The 500-bed Herbert C. Moffitt Hospital at the University of California Medical Center in San Francisco is the teaching hospital for the center. . . . It is a 15-story building. The operating department is on the fourth floor with X-ray on the third and laboratories on the fifth. Each of the service floors has a gross area of over 26,000 sq ft, and these are more or less in block form upon which the 'cross' of the typical bed floor is superimposed.

"The large service floors in block form were developed to permit efficient departmental layouts as opposed to 'strung-out' departments.

"The operating floor is a complete department, with operating rooms, etc., in the large block, cystoscopy in one wing, locker rooms, etc., in another wing, and departmental offices in the third wing. The latter wing is the 'tie' between the hospital and the adjoining Medical Sciences Building, the doctors serving, of course, both hospital and medical sciences.

"In the main operating block, great thought and consideration was given by the staff to methods of teaching and facilities which would enable most efficient and speedy use of rooms. The individual prep rooms are a case in point.

"The centralized work area provides shorter travel, speedy clean-up and good supervision."

MEDICAL BACKGROUND

From Mary K. Vickery, Operating Room Supervisor: "Having the entire fourth floor devoted to the department of surgery, anesthesia, urology and the operating rooms has cut down on the traffic of personnel and patients not directly concerned with this part of the hospital.

"In the cystoscopy wing: 1. The complete X-ray unit next to cystoscopy has worked out very well for both cystoscopy and the operating room. 2. The four cystoscopy rooms seem to be the correct number in proportion to the hospital. Being a combined X-ray and urology unit, it is used to capacity most of the time. 3. The head nurse in cystoscopy seems very satisfied with the layout and is able to run an efficient and busy department.

"In the locker and dressing room wing: 1. The surgeons' locker area has been difficult to manage, because there is not adequate locker space. We have had to assign two to four surgeons to each locker. If a key arrangement, rather than combination locks, whereby the surgeons could not carry off the keys, could be figured out, the surgeons would not have to be assigned a locker. The number needed would be less, but would necessitate a place for shoe storage. 2. Women surgeons' and nurses' locker rooms OK.

"In the office wing: 1. Much doubling and tripling up has been necessary to house the full-time staff in the office area. Offices are large enough to do this unless the number increases. 2. Nurses' demonstration room, which is a 'mock-up' operating room, has been a most valuable teaching aid for student nurses. 3. The post-anesthesia room is inadequate in size, but is an especially efficient unit with the space limitation. Patient flow is the most difficult part of this unit to manage, since there is no exit.

"In the operating room wing: 1. The cul-de-sac plan is better than an open plan because it tends to limit unnecessary traffic. 2. The centralized work area is excellent. This makes possible faster and easier case preparation and disassembly, following case completion. Also, it concentrates the auxiliary help so that it can be better controlled and supervised. Cabinet design should be planned in detail for this area. This was not done here, so that we have had to use the sterile storage area for instruments. The unsterile storage area is about one-quarter the space needed for large equipment such as extra instrument tables, hypothermia equipment, cardiac by-pass equipment, monitors, etc. We have had to use the east corridor for this type of storage.

"The prep rooms, I feel, are a luxury. They make it possible to get the patients to surgery somewhat in advance and furnish a place for waiting patients other than the corridor. Another purpose of these rooms is to decrease the time between cases. This requires extra anesthetists and nurses, however, and unless there are more anesthestists than one per operating room, the waiting patient cannot be anesthetized. I would prefer to see the space taken up by these prep rooms used to increase the size of the operating rooms and for planned storage of equipment.

"I believe the minimum size of an individual operating room should be 20 ft by 20 ft. In a university medical center, in which many large procedures requiring many large pieces of equipment are done, there should be at least two operating rooms 25 ft by 25 ft in size. It is difficult to maintain aseptic technique for these cases in such cramped quarters."

COMMENT

"1. For 10 operating room suite, entrance seems cramped, though good patient control for double-corridor layout.

"2. Ingenious method of taking care of X-ray transformer and control units outside of operating room.

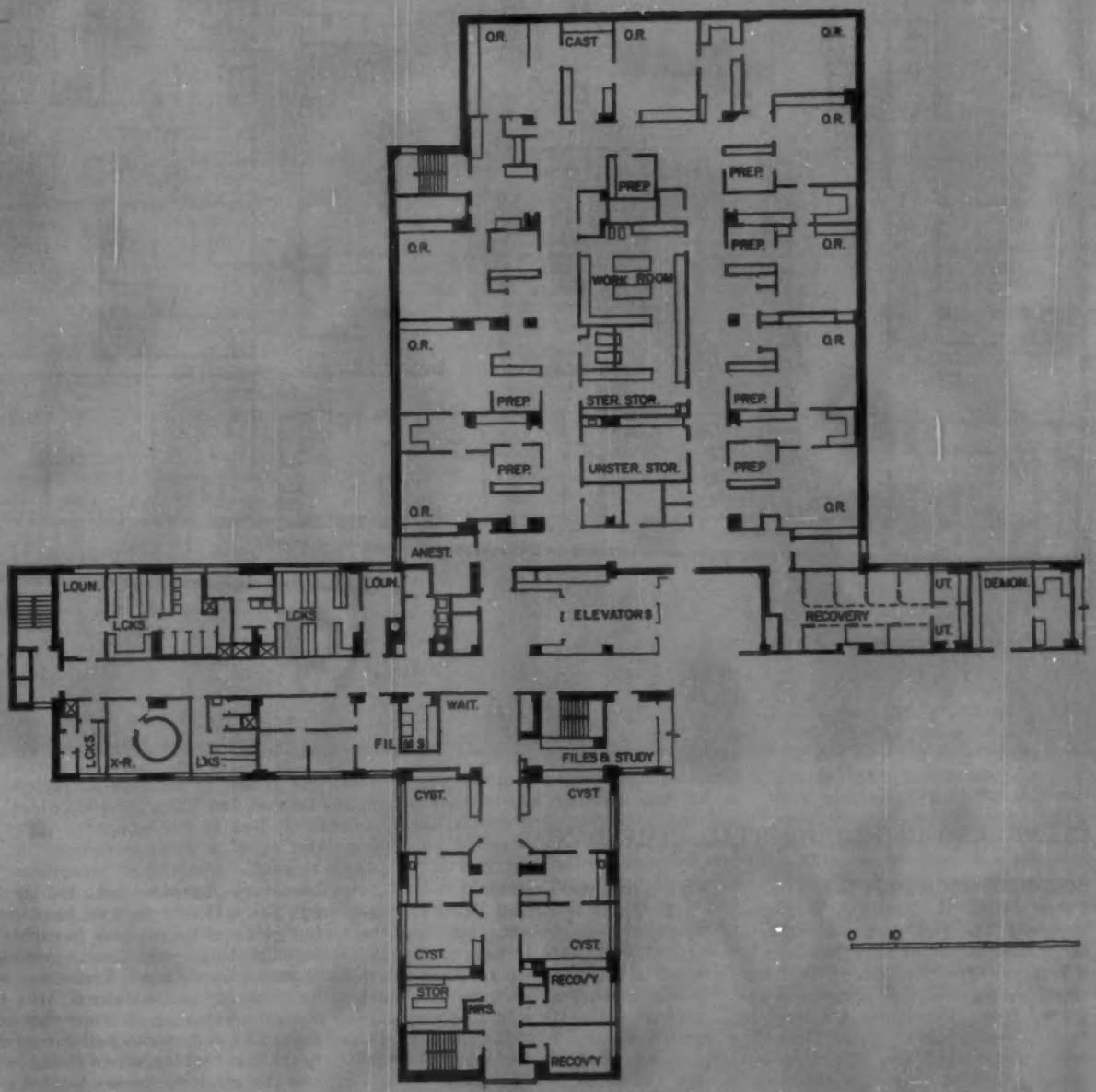
"3. Appears to be excessive amount of cabinet storage within operating rooms and prep areas.

"4. As teaching hospital, seems to have too few facilities for observation. Also, there might be at least one larger operating room for complicated surgery requiring larger team and more equipment.

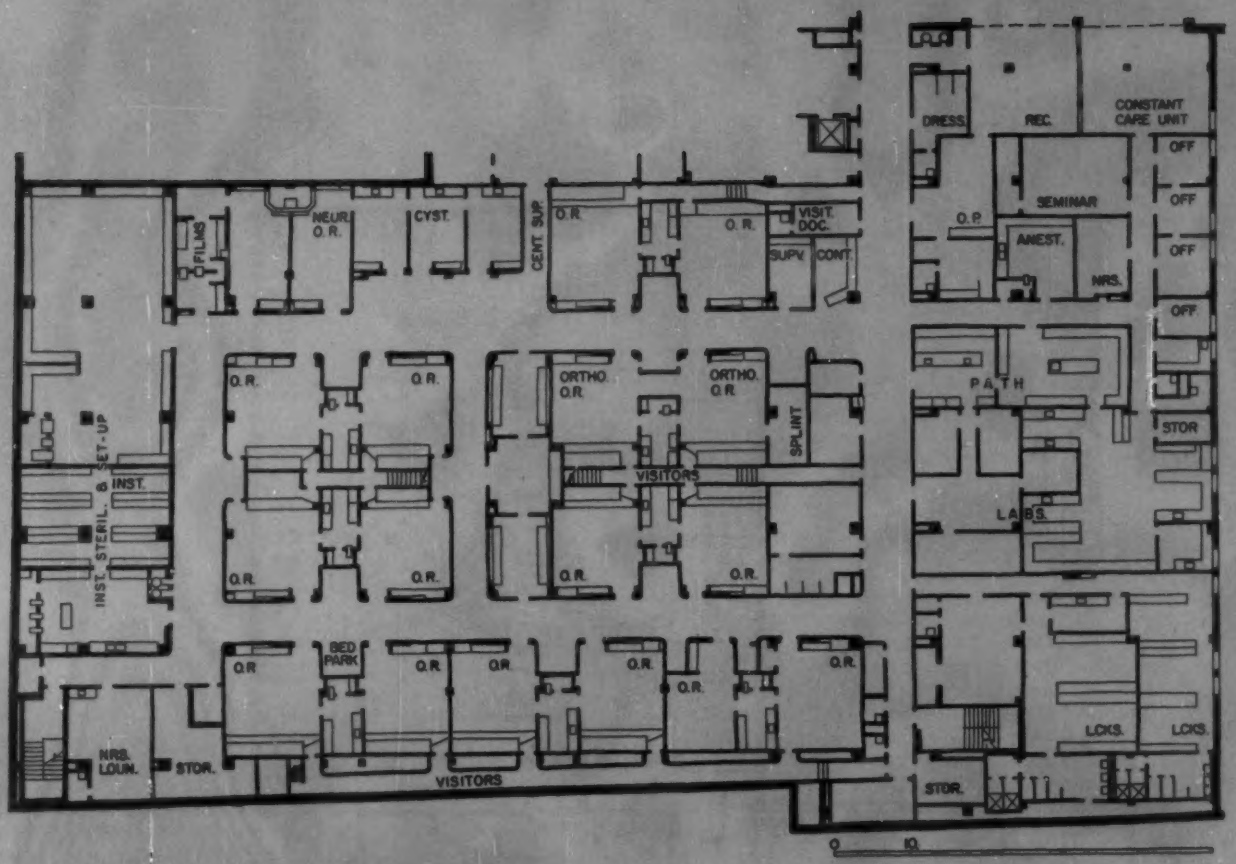
"5. Anesthesia storage and work room seem very small for department of this size, but perhaps local prep rooms take portion of supplies.

"6. Efficiency of dumbwaiters from central sterile supply debatable when removed from any central control. Must have good intercom system to have person at dumbwaiter to receive when needed.

"7. Long haul to dark room in cystoscopy suite from orthopedic and plaster room, where perhaps major portion of film originates."



Milton T. Pfleuger, Architect



Ellerbe and Company, Architects and Engineers

CLEVELAND CLINIC HOSPITAL, CLEVELAND

MEDICAL BACKGROUND

From James G. Harding, Superintendent: "1. The surgical suite is large because of the fact that ours is a referral type practice, in that the more complicated type surgery is referred here. Therefore, not only is our volume high in comparison to other places, but the type of cases are much more time-consuming and difficult than the average 450-bed hospital. The hospital is not primarily engaged in surgical work. However, the proportion is about 55 per cent surgical and 45 per cent medical. Since our men work in two rooms at one time because of the type of practice, we definitely do not feel that the number of rooms in our surgical suite is out of proportion. Here again, it is impossible to compare one hospital with another on the basis of a conception of how many operating rooms should be built per bed.

"2. There is no disadvantage to the substerilizing rooms not being accessible from the corridor.

"3. There is not adequate storage space for equipment, but, on the other hand, this is because of the rapid development in surgical procedures which require more and more storage space. We would be very surprised if any hospital could truthfully say that they had adequate storage space for any purpose.

"4. The nurses' lounge is more than adequate since it is strictly a lounge and not a locker room. The locker room is located very close to the surgery suite.

"5. We haven't been aware of any problem regarding floor space since I believe our floor space is fine for any major procedure, even including the open heart operations performed so often here.

"All in all, I would say that our operating pavilion has been one of the best from a practical standpoint. In fact, we have had visitors from all over the country, and they have been very impressed with the layout, etc. You will note that we have viewing galleries for visitors in each major operating room. Since times have changed, we do not believe these will be necessary in the future. Also, the central scrub room is somewhat controversial, but works well for us due to the fact that we have a closed staff, and the scrub rooms are located centrally with wide corridors leading to the operating rooms. I would say that the layout and everything about the suite has proven to be excellent, and the fact that we have the pathology department on the same floor has proven to be a wise feature also."

ARCHITECTURAL BACKGROUND

From Ellerby and Company, architects: "1. In studying this plan it must be borne in mind that the Cleveland Clinic Hospital has a closed staff, and had been operating a surgery for several years. A great deal of

time was spent in study on the layout, both as to staff requirements and the flow of patients, supplies and staff.

"2. The suite consists of a total of 21 operating rooms. Sixteen of the rooms are typical as to size and equipment, making it possible to schedule any type of major surgery in any one of them.

"3. All major operating rooms have view galleries. Access to all view galleries is from the corridor entering the surgical suite, thus any visitor can get into any view gallery without entering the surgical area.

"5. Centralized scrub-up and gowning area is incorporated in this plan. This is unusual for an operating suite of this size. However, the owners had some 20 years experience with this procedure and they were convinced it was the best procedure for them with their closed staff.

"6. Considerable area is devoted to centralized instrument washing, storing, sterilizing and set-up.

"7. Except for instrument sterilizing, all other packwork and sterilizing for surgery is done in central supply. Central supply is adjacent to surgery and has a direct connection.

"8. Directly adjacent to central supply is a very extensive surgical-pathological laboratory.

"9. X-ray facilities in this surgical suite came in for very special studying. The neurological operating rooms have their own X-ray facilities. Six of the other major operating rooms have special X-ray facilities. These facilities basically consist of a portable tube stand, which is plugged into a jack in the operating room and the control panel being in an alcove outside of the operating room, which enables the use of X-ray equipment that is superior to normal portable unit, and also provides the utmost in explosion-proof equipment.

"10. Surgical section has its own library.

"11. Adjacent to surgery is the surgical recovery area and the constant care unit.

"12. A very complete signal system and intercom system has been installed, enabling the personnel in the operating room to call any of the staff or personnel as may be required, and special signals in case of emergencies."

COMMENTS

"1. Interesting, but very special.

"2. Nurses' lounge seems very small for such a large unit.

"3. No access to sub-utility rooms except through operating room; this is a drawback.

"4. Supply cabinets in operating rooms can be stocked without going through operating room.

"5. Organization of total 21 rooms very compact.

"6. Lack of storage space.

"7. Good administrative control—secretaries, dictating, etc., and check-in point for patients.

"8. Doubt if central scrub acceptable for other institutions, with 55-ft corridor travel to farthest operating room door."

CHUQUICAMATA HOSPITAL, CHILE*

ARCHITECTURAL BACKGROUND

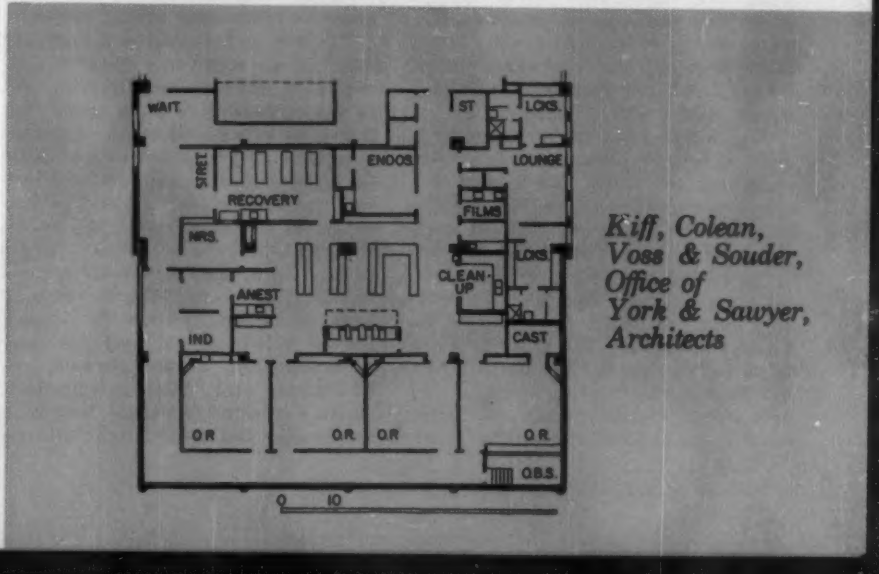
From J. J. Souder, architect: "The operating pavilion of the Chuquicamata Hospital, a 250-bed general hospital, company-owned and operated in connection with a large mining enterprise in northern Chile, is designed around two basic considerations: (a) a shortage of highly trained working personnel dictates the concentration of all skilled tasks in a simple, easily supervised area; (b) the complete separation of patient traffic from staff traffic has enthusiastic precedent in Chile and was desired by the staff.

"The result is an inner core of work space, sterile storage, instrument storage, sterilization and post-operative recovery which is directly related by dumbwaiter to central sterile supply. This core is surrounded on three sides by doctors' and nurses' lockers, five operating rooms with scrub facilities, anesthesia space, the usual small laboratory and dark room, and, at a point which controls a view of both incoming patients and the work area, a supervisor's station. Beyond this intermediate ring is a peripheral corridor which brings patients from the elevator lobby to the operating rooms.

"Four of the operating rooms are typical major surgeries in size and equipment. One of the four has a small gallery with ports provided for leads to data-recording equipment, but highly specialized surgery will not be done at Chuquicamata except in emergency. (Chuquicamata is 800 miles from medical centers in Santiago or Lima.) The fifth room is a urological room, and is so located that patients not to be anesthetized can be brought in and out quickly.

"Scrub facilities are immediately inside from the two pairs of major rooms. Only one battery of sterilizers, within range of the supervisor's eyes, is used for all sterilization in the suite.

"The work room is primarily an instrument and assembly room. All packs are to be prepared in central sterile supply and sterilized under supervision of the pharmacist. (Central supply is located adjacent to the manufacturing pharmacy, shares steriliz-



Kiff, Colean, Voss & Souder, Office of York & Sawyer, Architects

*Under construction; no administrative comment possible.

ing facilities with it and is administratively supervised by the pharmacist.)

"A glazed wall separates the work room from the recovery room so that, again, the supervisor and anesthetist can readily observe the type of care being given to post-operative patients without long absence from other duties.

"Doctors and staff, who are full-time employes, have already changed from street clothes to hospital clothing before going on to their work sites.

"Patients are brought to a waiting space outside the supervisor's office and then by private corridor either to anesthesia induction rooms or direct to the operating room. They neither see nor hear the preparatory activities between work room and surgery. They follow the same route back to recovery, which adjoins the waiting room, and after recovery go directly out of the suite."

COMMENT

"1. Very compact plan.

"2. Good circulation; patient travel separated from staff travel.

"3. Circulation between doctors' lockers and nurses station control point remote.

"4. Lack of free floor space for additional equipment storage.

"5. Interesting corner cabinet for suction lines, illuminators.

"6. Supply cabinet can be stocked without crossing operating room."

M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE, UNIVERSITY OF TEXAS, HOUSTON

ARCHITECTURAL BACKGROUND

From MacKie and Kamrath, architects: "Cancer treatment requires extensive surgical services—much more than the general hospital.

"Eight major operating suites were grouped in units of four each, with adjoining preparation rooms, so that patients could receive pre-operative anesthesia while other patients were on the operating table. Prep rooms also used for post-operative recovery. Anesthesia banks built into common wall between operating room and prep room. Cabinets built into corridor walls, so that operation packs could be inserted from corridor side and removed from operating side, omitting traffic through operating room.

"View gallery and television projection room dropped to 7 ft above main operating suite floor for close vision and enlarged TV projection in color to various conference rooms and auditorium in the main building. Colors selected for contrast in TV projection.

"Special operating room lights were designed by the hospital. Every effort was made to eliminate equipment, cords, extra lights, etc., from cluttering up the operating room floors. Provisions made for use of X-ray and radioactive isotopes.

"Pathologist located on same floor with two-way communication with surgeons, so that frozen sections could be viewed and reported on during surgery. Large amounts of surgical instruments are used in the eight major and two minor operating rooms, as each instrument is used only once during an operation to avoid cancer cell distribution. This feature accounts for the extra large instrument sterilization room.

"Central sterile supply on same floor as operating rooms for close supervision by surgical supervisor and immediate access for supplies to both the surgical unit and the main hospital.

"A private elevator direct from the surgical floor to the betatron and cobalt room located 20 ft below ground gives ready access as required for treatment with high voltage beta and gamma rays.

"Main hospital sound control room is located immediately above main surgical suite for close supervision of TV projection and lecture recording."

MEDICAL BACKGROUND

From R. Lee Clark Jr., M.D., Director and Surgeon-in-Chief: "The surgical suite at the University of Texas M.D. Anderson hospital and Tumor Institute was designed after 15 years of experience in evaluating surgical pavilions at the principal medical centers in America and Europe. Basically, the surgical suite is designed to minimize traffic through the operating rooms and operating suite and to provide maximum utilization of space, equipment and personnel to save the time of the surgeons and preserve the safety of the patient.

"Unique in this design is a utility panel in one wall where there is concentrated the major equipment used in the operating room in order that it can be supervised by the anesthesiologists. This includes anesthetic gases, anesthesia supplies, cautery and radio-knife, suction and instruments to record the patient's condition, and light control. Other factors of interest are the combination quick sterilization room with a scrub-up area, utilization of the corridor wall for pass-through cabinets, two-way communication to the surgical pathologists and nurse supervisor, static electricity warning devices, a newly designed ceiling light controllable by the surgeon, provision of color-compatible television, observation galleries, pre-anesthesia preparation rooms and post-anesthesia recovery room, provision for the use of X-ray therapy and radioactive isotopes in the operating room, complete separate air conditioning and humidity control for each individual operating room, and finally, a carefully designed flow plan for the preparations of sterile linens, materials, supplies and instruments under the supervision of the central control of the nurse supervisor."

COMMENT

"1. Through-wall cabinets excellent, but their use must always be checked for approval by local building codes an dinsurance underwriters, as corridors are usually legal fire exists.

"2. Prep rooms give good holding space for pre-operative patients, even if they may not be used for induction. Manpower—enough nurses and anesthetists—is a problem.

"3. Good control of patients and staff entering department, with check-in point centrally located.

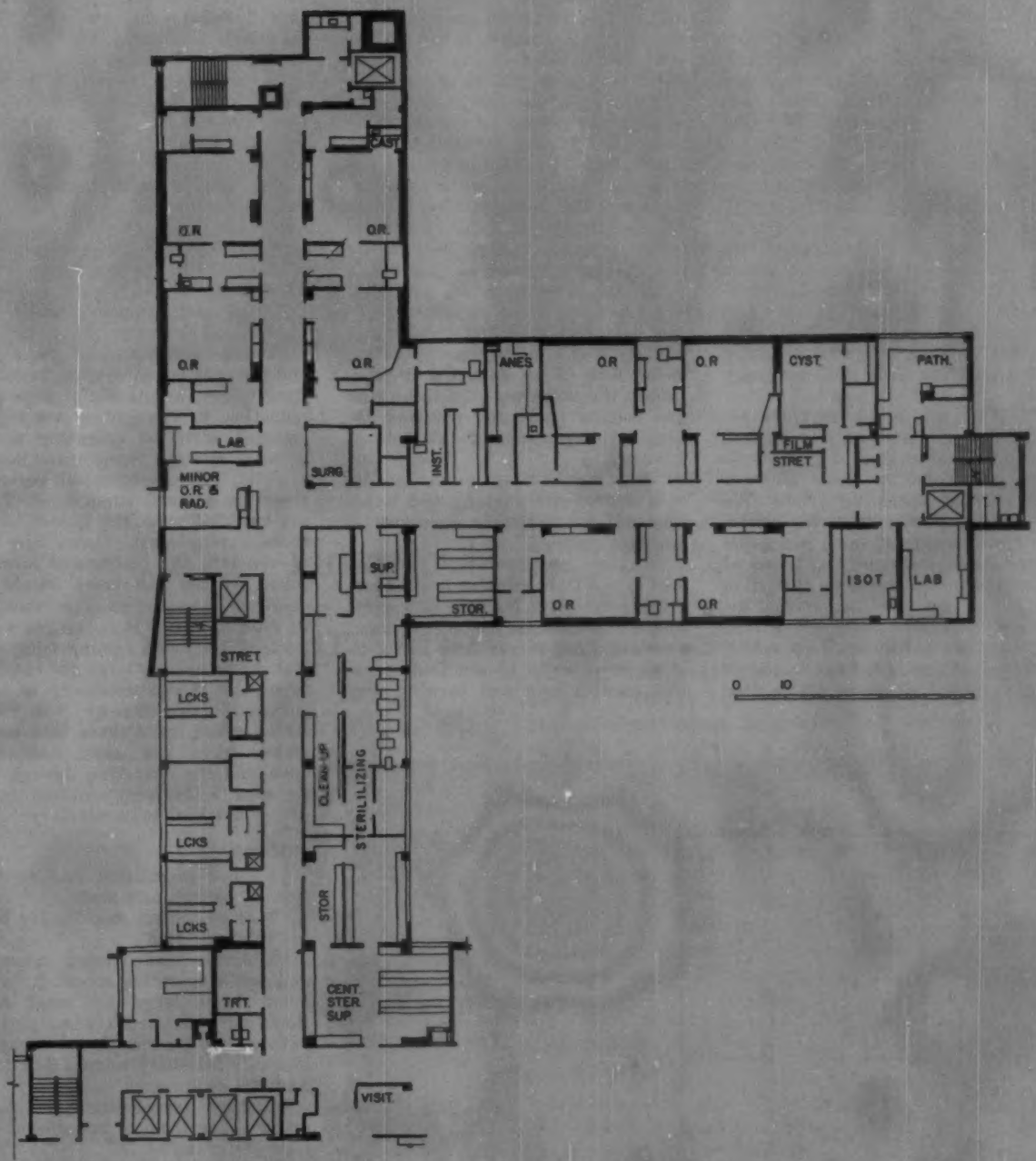
"4. Is there enough equipment storage space?

"5. Assume the access to pathological lab and isotope labs via stair and elevator within department, to avoid major portion of traffic to and from these serves through sterile surgical corridor.

"6. Ingenious method of providing small observation galleries in certain rooms as distinct from observation dome over one major room.

"7. Are there adequate facilities for handling waste, soiled linen, etc.?

"8. Hospital of this nature should need some facilities for teaching and conference within or adjacent to surgical suite."



MacKie and Kamrath, Architects; Schmidt, Garden & Erickson, Consulting Architects

LONG ISLAND JEWISH HOSPITAL, NEW HYDE PARK, N. Y.

ARCHITECTURAL BACKGROUND

From Isaiah Ehrlich, of the office of Louis Allen Abramson, architect: "The special aspects of the suite are —1. Its location on the first floor outside the main mass of the building, to provide for expansion of the operating room suite when the additional floors are added. Also, we did not want the operating rooms to be confined by the dimensions of the typical floors. Placing the suite where we did, we were able to make the rooms of the dimensions we wished, in addition to having the story height a full foot higher than the typical story. Having it on the first floor produced better relations with the emergency unit.

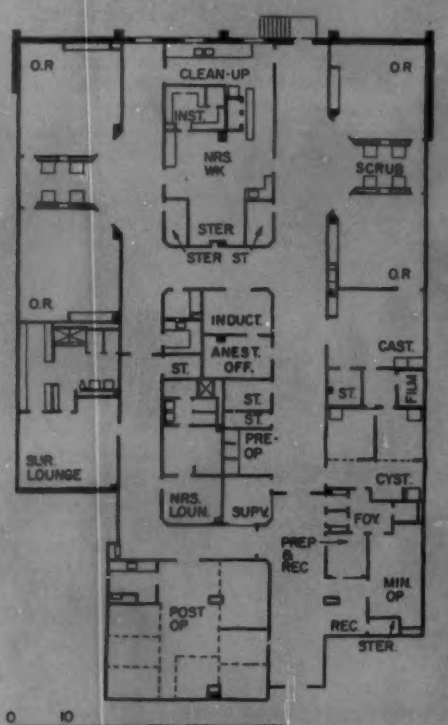
"2. With the double corridor arrangement, we were able to discard the old Goldwater Unit of a substerilizing and scrub-up space between each pair of operating rooms. We felt that this arrangement was wasteful of equipment and in no way guaranteed sterile instruments. We placed the nurses' work room so that it is central to the operating rooms, including those to be added at the westerly end in the future. We provided a continuous conveyor from this work room to central sterile supply on floor below so as to obviate the need for any personnel circulation between the two points, and by doing this we were able to place central supply at a point readily accessible to the nursing units without the need of help who do not belong in the operating room ever getting in there. A little detail that we added was that the doors to the nurses' work room are pneumatically operated by a foot treadle in the terrazzo floor, so that a nurse coming in holding heavy trays has the doors opened automatically.

"3. All operating rooms are without windows, as we were convinced that outside light interferes with proper light control in the operating room, acts as an annoying distraction to the surgeons, adds to heating and cooling loads and presents the usual problems with double sets of windows.

"4. The operating room has its own instrument washing and handling unit but is remote from central sterile supply.

"5. The post-operative nursing unit is in a tight relation to the operating room suite for ease of control by the anesthetists. The arrangement provides direct access from the operating room suite to the post-operative nursing unit and permits easy access to the nursing unit from outside the operating room area. This we felt to be important because visitors were to be admitted.

"I sounded out the hospital personnel as to how the above elements have been functioning. The reactions of the chief anesthetist and the operating room supervisor are: 1. They are highly satisfied with location. Partition dividing cystoscopy room into two stations was found to cramp activity somewhat and will be removed. 2. They feel the central core location of the nurses' work room is better than the conventional arrangement. They would, however, have liked to have had more storage space, and 100 per cent more room for anesthetists' offices, anesthesia storage and induction. 3. The doctors are highly satisfied with the operating rooms without windows. Some of the nurses are not, for psychological reasons; these are a small minority. 4. They are satisfied with the nurses' work room arrangement. Doors are not provided in the instrument storage room. Nurses feel there should be doors on the cabinets. The conveyor to central sterile is no longer used. Some of the packs coming from central sterile are too large for the conveyor and it was necessary to send personnel there anyway. Now regular trips are made there. The pneumatic doors are kept constantly open and the operating devices are not used. 5. Recovery unit and its location are highly satisfactory."



Louis Allen Abramson, Architect

COMMENT

"1. Good circulation and separation of patient and staff.

"2. Good control check-in for both patients and staff.

"3. Ample maneuvering space in and out of operating rooms. Note divided doors, large and small leaf. Both must be opened when moving patient, but for housekeeping chores it is only necessary to open 3-ft door. Reduces swing area.

"4. Good consolidation of clean-up, work, instrument space—but admittedly cramped.

"5. Good pre-operation holding area under supervision.

"6. No access to dark room from areas other than fracture and cystoscopy, though they are the major users.

"7. In two of the operating rooms, the room must be traversed to stock supply cabinets.

"8. Lack of storage space for extra equipment."



Phil Fein & Assoc. photos

Large Hospital for Military and Civilian Use in Alaska

Elmendorf Hospital
Elmendorf Air Force Base
Anchorage, Alaska

Architects: Skidmore Owings & Merrill

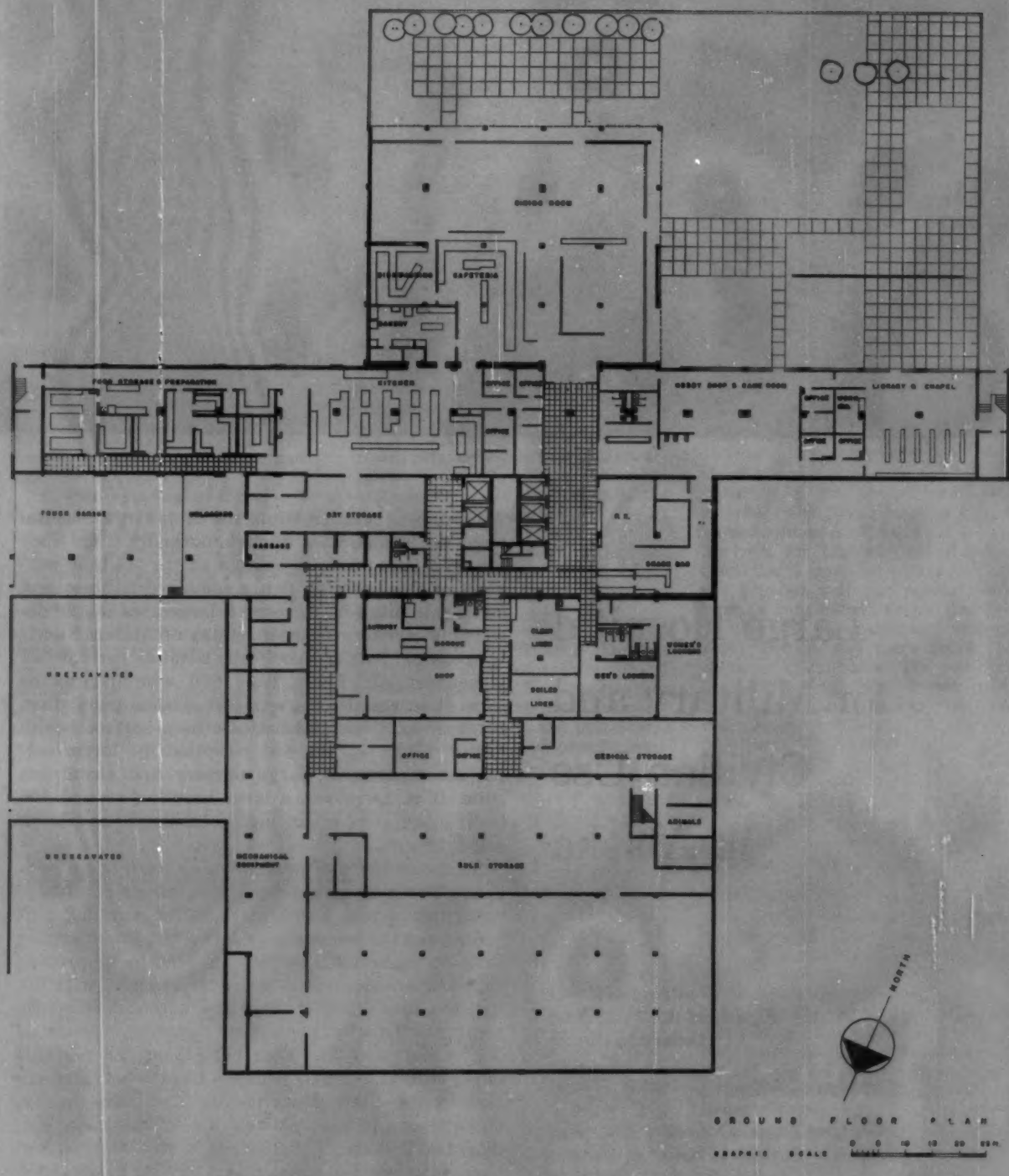
Structural Engineer: Isadore Thompson
Mechanical Engineers: Keller & Gannon
Contractor: J. C. Boespflug Construction Company

Construction Supervision by:
Alaska District Office
Corps of Engineers, U. S. Army

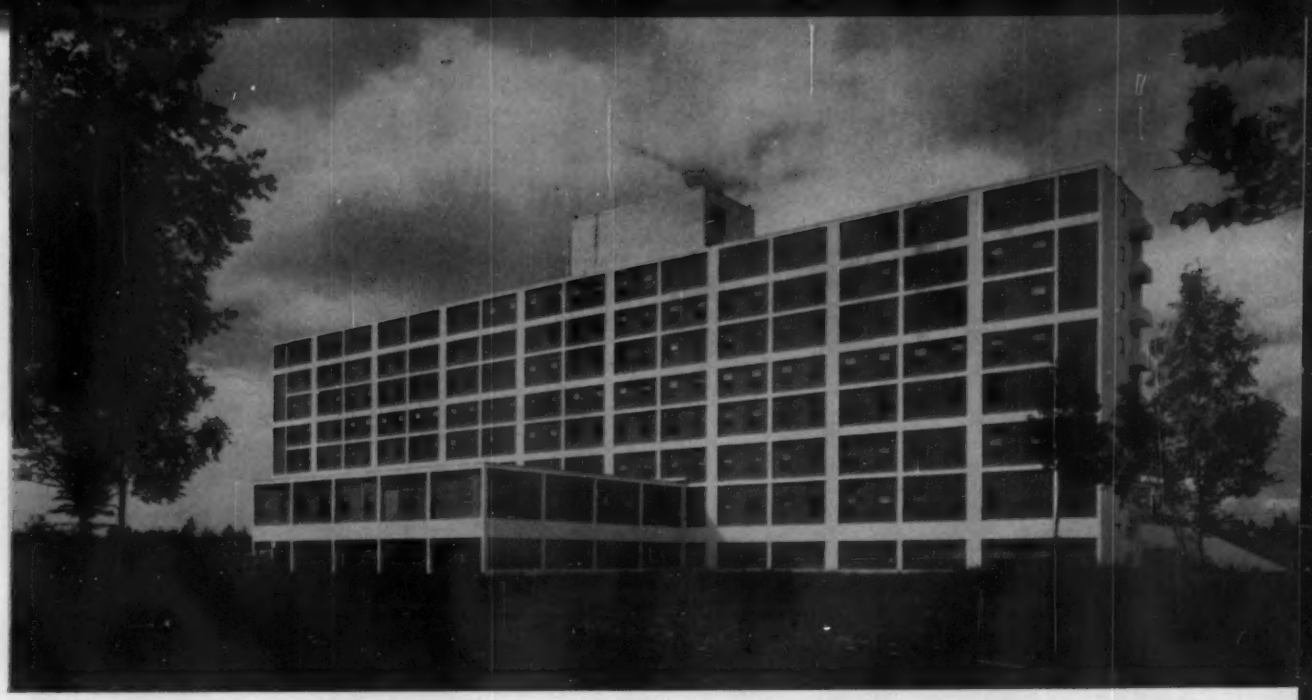
As if the circulation problems of a large hospital were not complicated enough normally, here they are especially intricate because of the multiple purposes of this hospital. It is a combined military and civilian institution, to serve a large area in the developing territory (pardon, state) of Alaska. Strictly speaking, it is an Air Force hospital, serving the Elmendorf Air Force Base and administered as such. It serves also the adjacent civilian population, not only as a hospital but also as a sort of health center. Thus it has an exceptionally large outpatient department, large nursery and obstetrical suite. It is, moreover, a large hospital, around 400 beds, in an area where health facilities have to be self-sufficient.

So its problems of programming were taken seriously. The plan makes clean separations of diverse departments and functions; typical nursing unit floors take the narrow slab form, but lower stories have an essentially three-wing scheme to provide those separations. A large square-shaped wing on the first floor gives a clinic and outpatient department as virtually a separate building, though it does connect to the main portion at the elevator bank, so that hospital patients have convenient access to the clinic departments. Most importantly, outpatients are kept entirely out of the main hospital traffic lanes. This plan, with this feature, has been approved for the military for use in others of its hospital installations.

Above the first floor this same wing narrows down to suitable dimensions of the surgical suite (third floor) and the obstetrical suite (second floor). Above the third floor the wing becomes merely an elevator and stair tower, this transport core being nicely placed with respect to main traffic routes. Also it keeps individual floors free of the interruption of elevators and elevator lobbies.



Ground floor (mostly a basement level) takes advantage of grade to make a gesture toward outdoor living in cold Alaska; the dining room, PX, library and chapel open to the outdoors. Truck garage and loading dock are also at this level. The large first floor coverage gives ample room for storage at the ground floor



The building is oriented with the nursing unit wing facing south, with the majority of the bedrooms and wards facing south where there is an excellent view of the mountains. The sloping site presented the opportunity of providing two levels of access for ambulant traffic, also for truck and ambulance entrances. Access to ground floor has been provided at dining room, recreation rooms, library and the chapel, and by stairs at ends of nursing units. Recreation, dining and PX areas have been grouped to join outside areas for whatever outdoor activities the climate permits.

The four typical nursing floors consist of two nursing units each of either 28 or 34 beds, with a centrally located floor-serving kitchen. The majority of the patients' rooms are oriented to the southeast with the nurse's stations, utility rooms and offices to the north. Fenestration and sun control presented a problem due to the extreme north latitude of the Anchorage area. The low angle of winter sun made impractical any "eyebrow" solution to sun control and the extremely low design temperature of —30°F made strip windows costly due to the necessity of providing insulating sash. The solution provides 5- by 5-ft windows at 10 ft-9 in. centers with a low sill height to enable bedridden patients to take advantage of the view of the mountains in the distance. The typical window consists essentially of two superimposed double hung windows providing the greatest insulating effect and flexibility of ventilation at minimum cost. Lightproof shades and venetian blinds are provided as a method of controlling sunlight and to provide darkness during the summer nights. A Women's and Pediatric nursing unit is located on the sixth floor and a neuropsychiatric ward and treatment and consultation facilities on the seventh floor.

The structural system for the building is reinforced concrete, with flat slab construction for floors and roof. The flat slab was chosen for economy of construction, in addition to keeping floor to floor heights at a minimum and providing plain surfaces for application of insulation to the slab at the walls. Climatic conditions required insulating all exterior walls, and insulating floor slabs, top and bottom, for a distance of four feet from the exterior walls to prevent freezing of water in pipes in these areas. Tile floors in bathrooms and other locations are installed with adhesive to avoid complicating the floor structure with depressions for mortar setting beds.

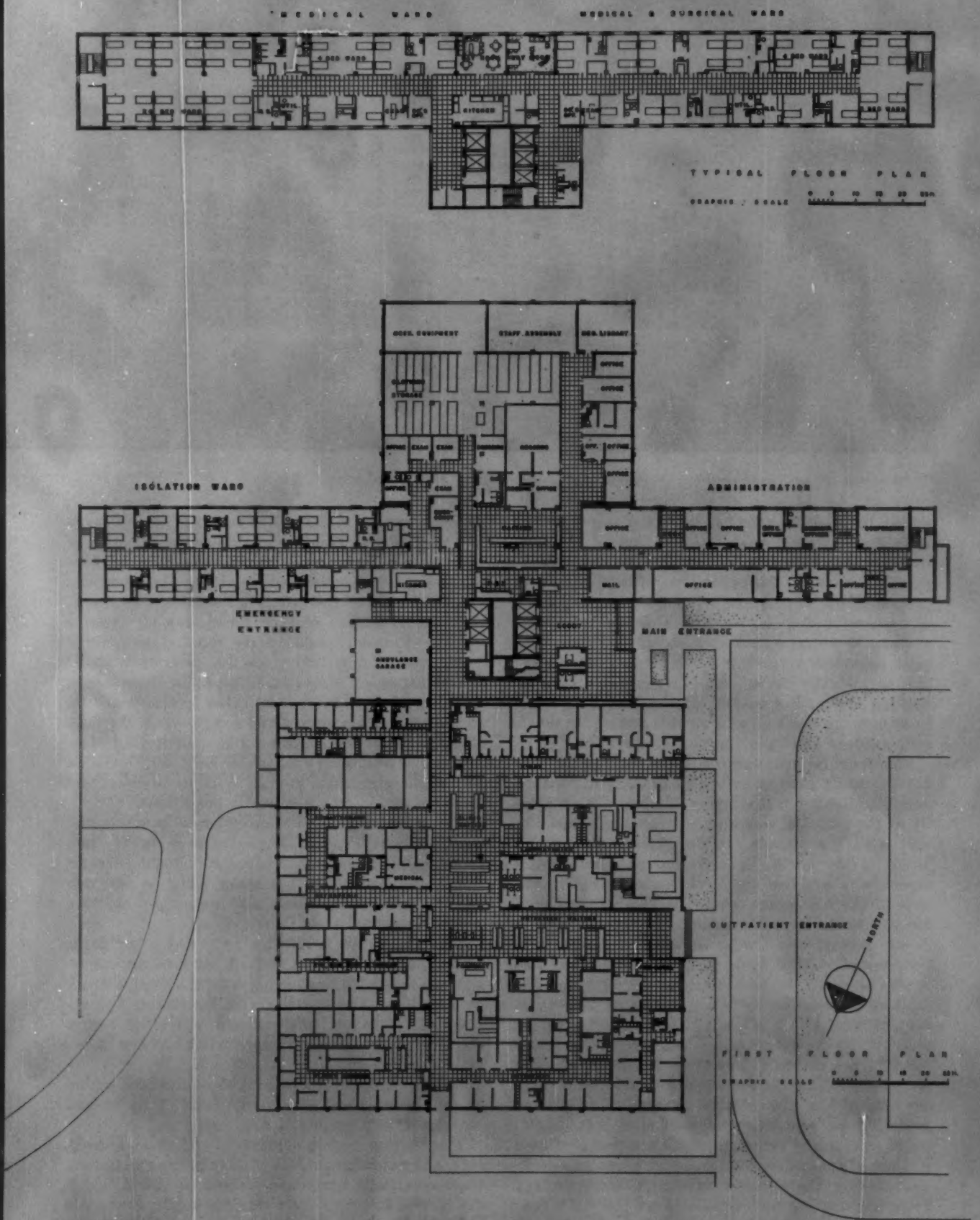
Exterior walls are of concrete block installed within the structural panels. Window area is used judiciously due to the climatic conditions.

The main lobby, and waiting areas in clinic and outpatient department have terrazzo floors, and acoustical ceilings with perforated cement asbestos finish. Wall finish in the main lobby is terrazzo and hardwood. The clinic and outpatient waiting areas have vinyl wall finish.

Typical finishes in nursing units and other areas above the first floor are asphalt tile flooring, acoustical ceilings with perforated cement asbestos finish in corridors, plaster ceilings in bedrooms, and ceramic tile in toilets, utility rooms, operating rooms, etc. Operating rooms have conductive terrazzo floors and base.

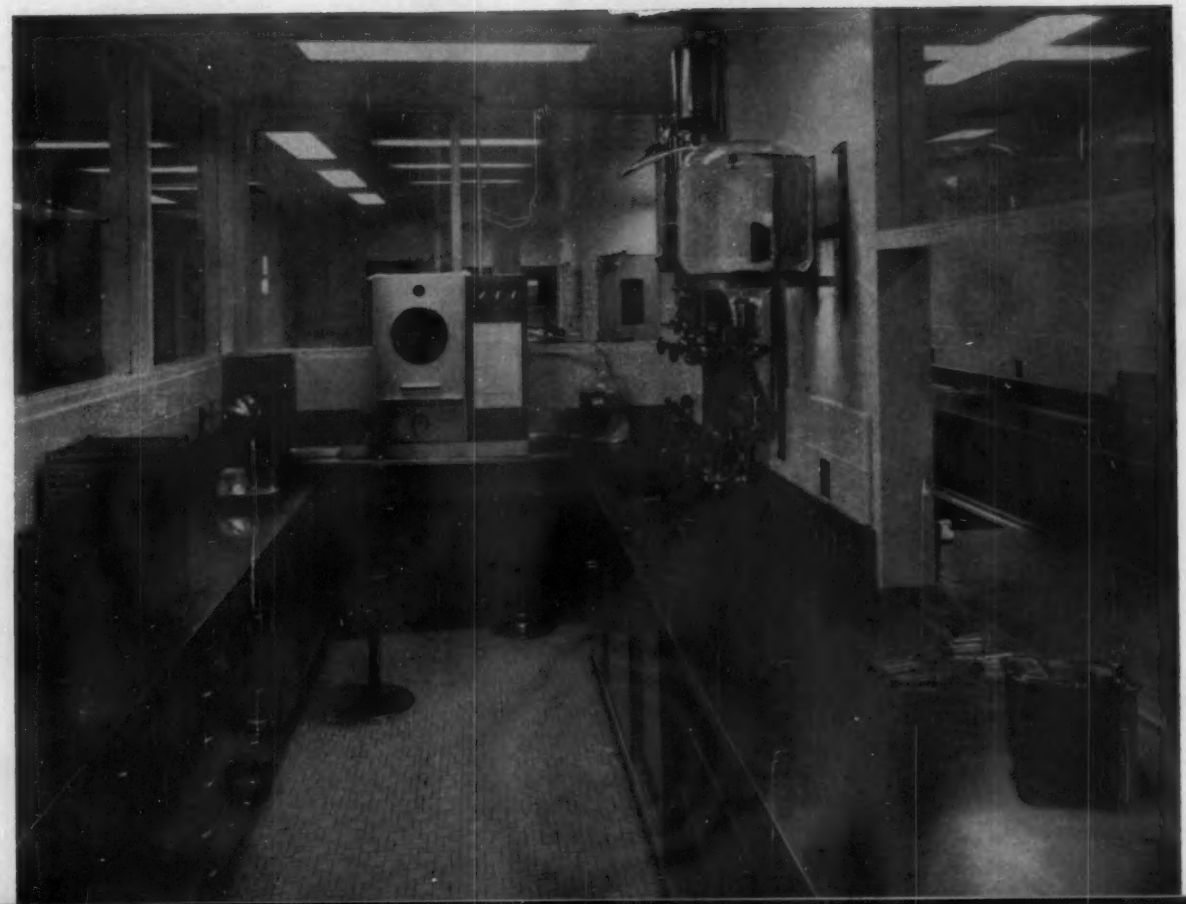
An underground tunnel provides access for piping to the power plant which supplies hot water and steam for heating, sterilizing, etc.

The heating system consists of radiators, convectors, and extended-surface steel tube type radiators, thermostatically controlled. Tempered outside air is distributed to rooms from corridor ceiling ducts and exhausted by fans. Operating rooms, recovery areas, outpatient therapy department and similar areas are fully air conditioned, including dust removal.

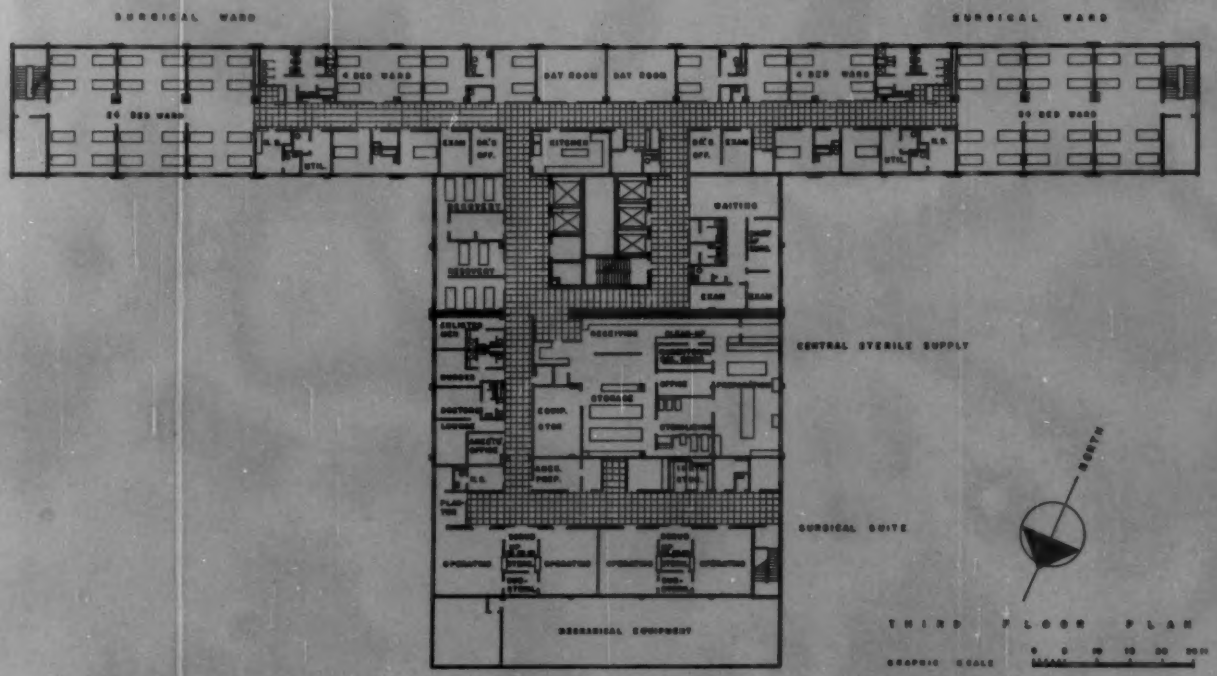


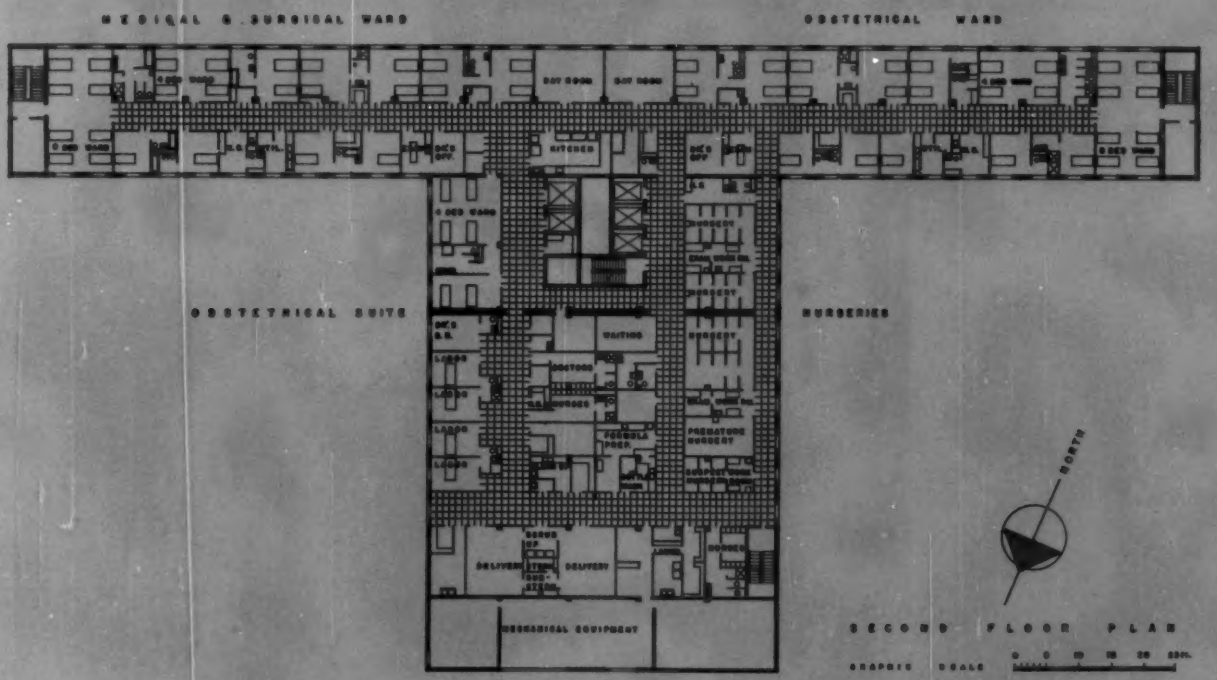
First floor outpatient wing keeps all clinic traffic out of the main hospital building, but is easily accessible to inpatients. Ambulance entrance is at this level, above the truck garage and loading dock. Typical floor has only nursing units, with vertical transportation in a core outside the wall dimension. Most beds are in two- or four -bed wards





Military and Civilian Hospital, Alaska



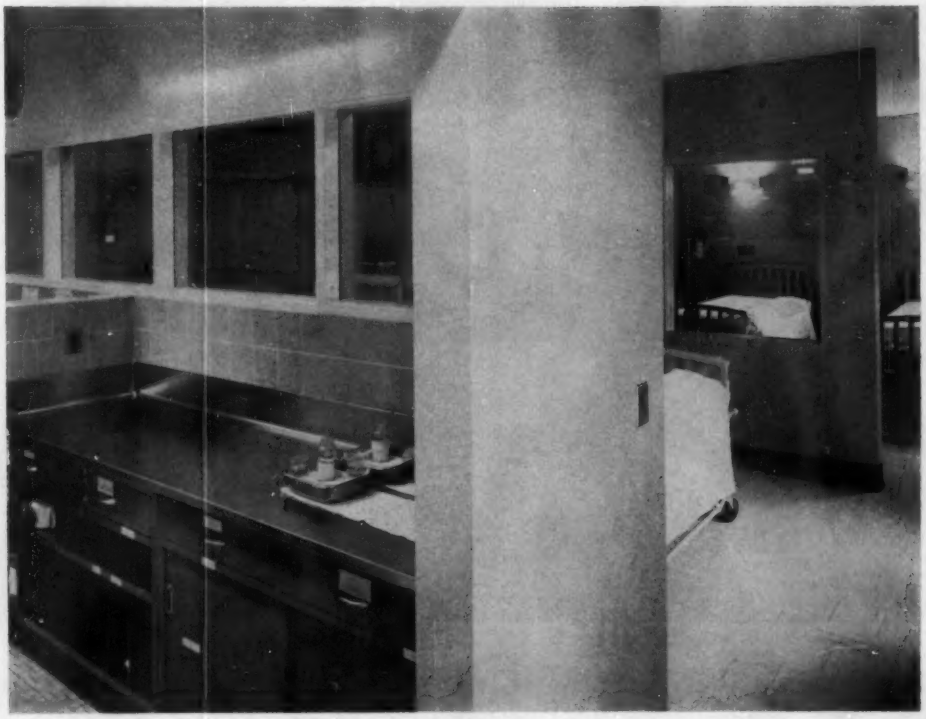


The obstetrical suite, nurseries and o.b. nursing unit are on the second floor, because of the high traffic generated by this department. Labor and delivery rooms and so on have their own cul de sac locations, as do operating rooms on the floor above. The elevator cores separate these departments from the corresponding nursing units





Military and Civilian Hospital, Alaska





Architectural Engineering

The demand for technical information about building is being pursued on many fronts. This is so because of the many aspects of building technology, and the ever-increasing pressure upon architects and engineers to build faster, better and cheaper, always with new materials, equipment and techniques. Consider, for example, the variety of things the professional has to be concerned about: the sciences of structure, air conditioning, lighting, acoustics; the characteristics of materials; the determination of occupants' physical needs; the mechanics of interpreting designers' ideas to builders; the performance of completed buildings.

The purpose of the *Architectural Engineering* section since its inception 12 years ago has been to make the life of the professional who deals in technical matters a little less harassed, a little more satisfying. In going forward, our objective, as before, is to state the problems as clearly as possible, and from various viewpoints—to show how these problems are being attacked piece by piece by the specialist, and totally by the practitioner who has weighed and coordinated specialists' research. We have drawn attention to, and presented techniques, design aids and data as early as they have become available. We have engaged specialists for original projects in areas little touched before.

But this is not enough. We are going to step up the pace with technical material. First of all there will be more pages in the *Architectural Engineering* section, starting next month. Second, we plan to put renewed emphasis on subjects such as mechanical and electrical systems, materials, costs and specifications. Third, there will be more space devoted to sources of technical data and to technical news.

This, then, is where we have our sights. Focus will be sharpened on problems that seem omnipresent, those currently causing trouble, and those likely to give concern soon.

To demonstrate, the AE section of this issue has the following:

ADVANCED STRUCTURE FOR FLEXIBILITY *pages 238–241*

While hyperbolic paraboloids are growing like mushrooms in springtime, this is the first large-scale use of them in an industrial building. The three-dimensional space frame is unusual too, enclosing a series of 106 unitized air conditioners and allowing a maximum in flexibility for utilities.

CAVITY WALLS AT A REFINED STAGE *pages 242–244*

Everyone knows what a cavity wall is. But like everything in the building business, there is always a steady stream of improvements. The ones shown here make the inherently good performance of the cavity wall even better.

WHY COMPOSITE DESIGN? *pages 245–246*

As with prestressed concrete, the theoretical advantages of this method have been understood for a long time. Bridge designers have been using it extensively. Applied in the right situations, it has some attractive economies for buildings.

PRODUCT REPORTS AND OFFICE LITERATURE *starting on page 247*

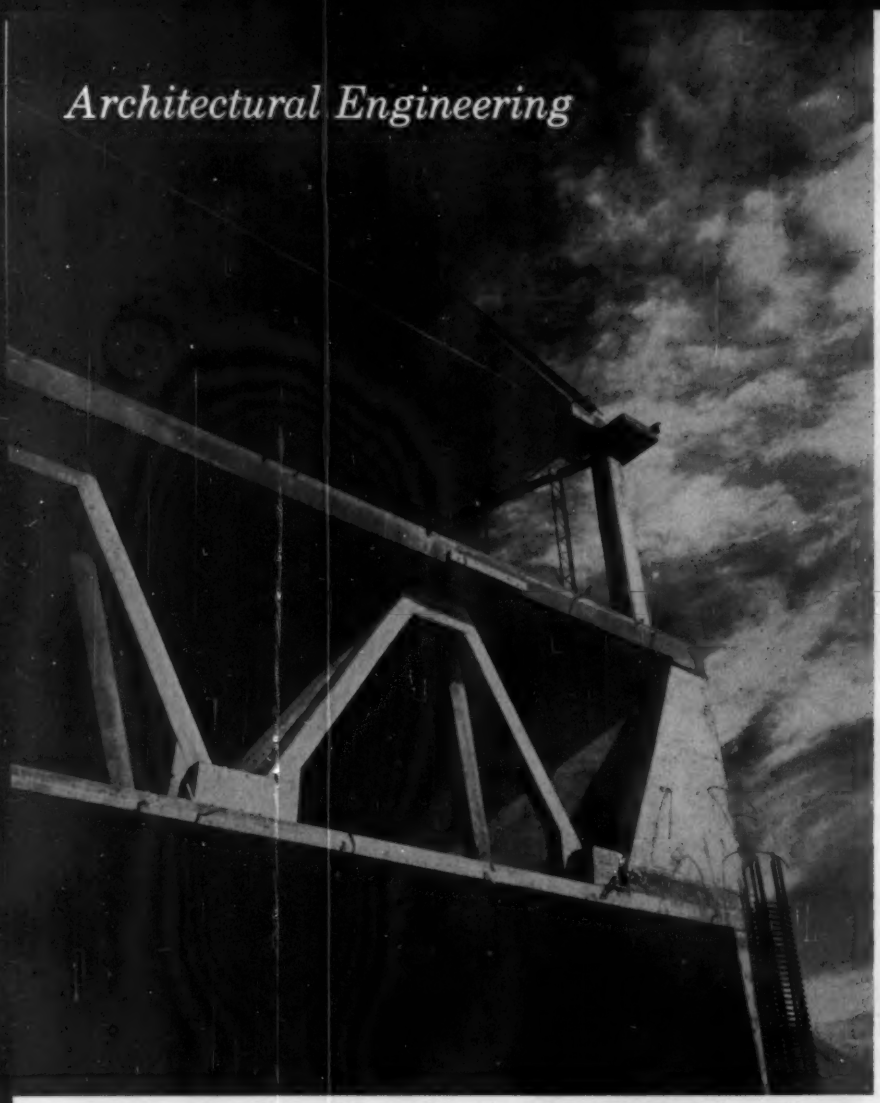
These monthly features continue to give full coverage of everything new in materials, equipment and services.

TIME-SAVER STANDARDS *pages 251, 253, 255*

Various approaches to solar shading have been made available over the years. A convenient graphic method is outlined here, and the characteristics of devices for various orientations are tabulated.

TECHNICAL ROUNDUP *starting on page 260*

Short technical news items of interest.





N. Bleeker Green



ADVANCED STRUCTURE FOR FLEXIBILITY

Spirit and nature of building techniques reflect the manufacturing activity in this plant — making transistors. Ease of changing processes over-night and feasibility of future expansion were solved by 63-ft square hyperbolic paraboloids for a roof, and concrete space frame for air conditioning and utilities.

Put transistors and Texas together and you're bound to come up with something unusual in the way of a structure. To meet the swiftly changing patterns of the electronics market, production lines frequently must be expanded, deleted or built from scratch. So the owners wanted their building to be a versatile tool for adaptation to these needs.

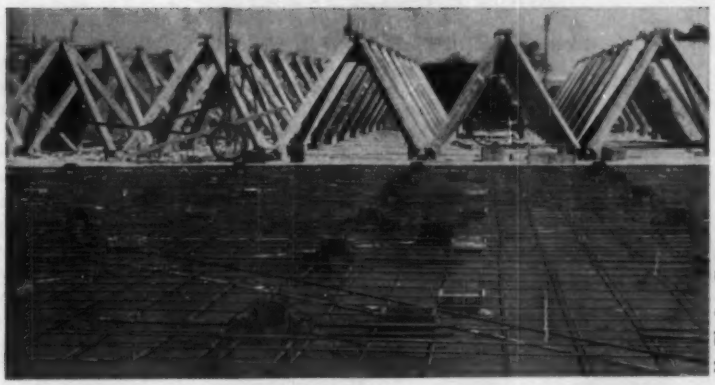
This 310,000 sq ft building with its 37 hyperbolic paraboloids, and its space frame carrying 106 unit air conditioners, plus all pipes, ducts and wiring, not only anticipates rapid change—it says so to its employees and industry at large.

There are three levels in the new Texas Instruments Semiconductor-Components plant: (1) ground floor for administrative and engineering offices and laboratories, (2) the 8-ft, 3-in. space frame between the two main floors, containing air conditioning units and all pipes and ducts, and (3) the top floor for manufacturing.

The structure of the between floors mechanical area is comprised of a series of precast concrete, V-tetrapods (four-footed diagonal members) which tie together the upper level floor slab and lower level ceiling slab into a rigid three-dimensional truss or space frame. The concrete space frame is supported by spiral-reinforced, square concrete columns on 63-ft centers, which is the bay dimension in both directions, and also the roofed over area covered by one hyperbolic paraboloid. On the manufacturing floor the column is divided into four smaller columns which support the roof. Each of these four carries one corner of a four-gable type hyperbolic parabolid shell. The columns are covered so as to form an air plenum and to enclose roof drainage pipes and sprinkler system plumbing. Each shell, 3 to 4 in. thick, is structurally



N. Bleeker Green

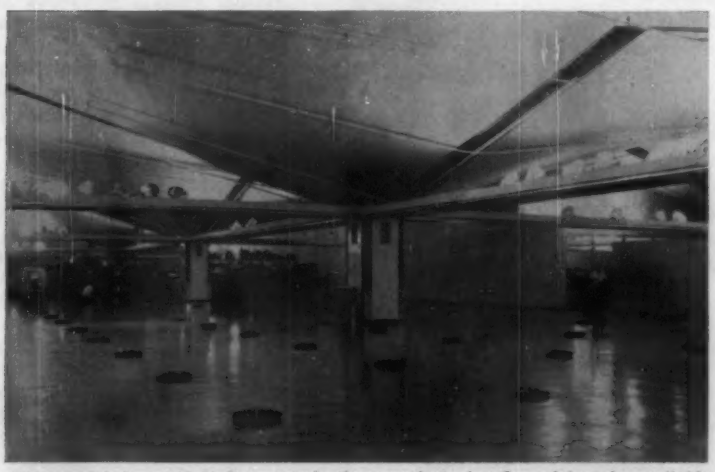


N. Bleeker Green

Space frame of precast concrete "tetrapods" is sandwiched between ground level office floor and manufacturing floor on top. It is supported by square concrete columns, 63-ft on center, except at the north and west perimeters where the frame cantilevers 32 ft to give a sheltered walkway. At these edges, columns are circular and smaller, and a column is added at midspan. Bottom slab of the space frame (shown directly above) which has prestressing cables acts as the bottom chord, slab of the manufacturing floor as the top chord. Webs in space frame at supports take heavy shear forces



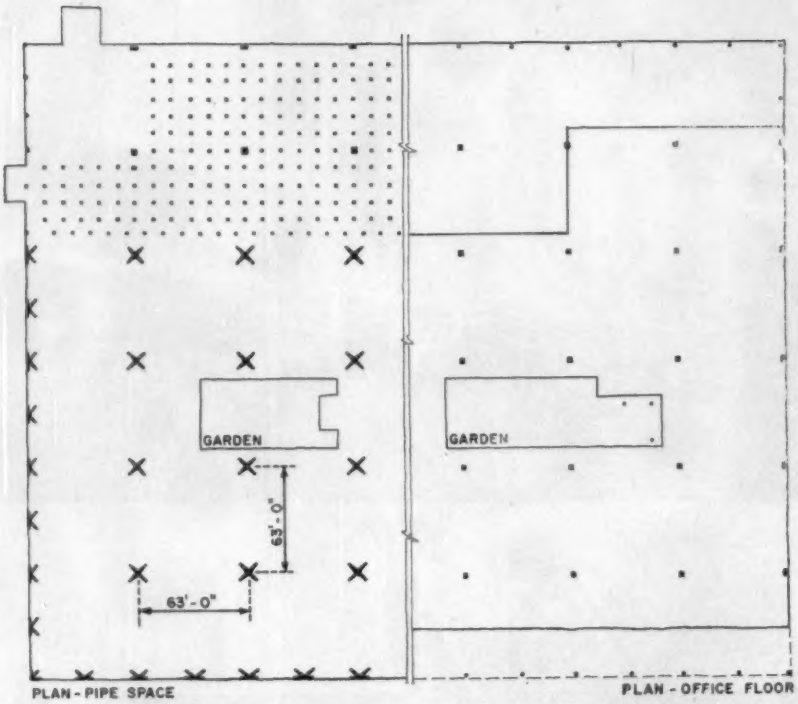
Dust, and moisture as well, are enemies of transistor manufacture. Workers must don lint-free clothing, and pass through an air lock before going into the "Snow-White" area



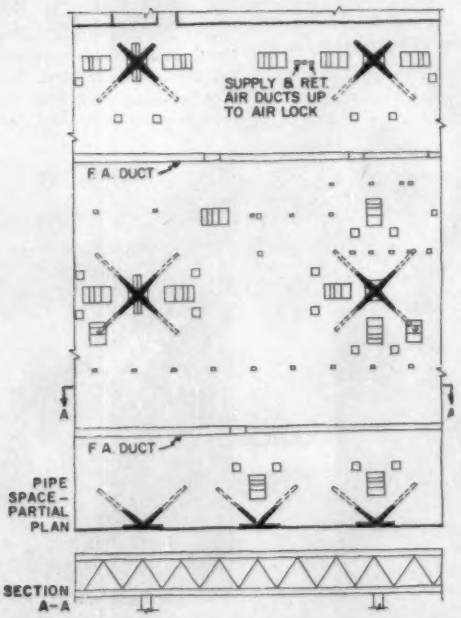
1500 access holes at 10-½ ft centers in the manufacturing floor slab make available any service at any point. Services include natural gas, some rare gases, water, electricity, communications and comfort conditioned air



Extreme care in transistor assembly is exemplified by use of dry boxes in which humidity is limited to 12 per cent instead of 20 per cent as in room atmosphere itself



Where space frame cantilevers at west and north sides (bottom and left on plan), space frame diagonals have only two webs at 45 deg. angle in plan, but there are additional webs in the plane of the outside wall. Mechanical room was placed in one corner of building (upper left on plan) to hide cooling tower and give convenient shipping dock



Blowup of manufacturing top floor plan indicates webbing in space frame (see photo previous page) and air conditioning units around columns

free from the adjacent one, and the space between is covered by precast wood-cement planks.

Air Conditioning

To give a high degree of air conditioning flexibility, 106 package units of 4000 and 2000 cfm nominal capacity were distributed throughout the space frame. They are grouped in threes around the columns, with air being fed to the manufacturing floor through the column "plenum" and to the office floor through the floor via metal ducts. High velocity drum outlets at the top of the columns provide distribution of large air volumes across the 63-ft bays. Air velocity in the column plenum is 4000 fpm, and discharge velocity is 2300 fpm. In this way there are no exposed ducts in the manufacturing area to be an eyesore and to collect dust.

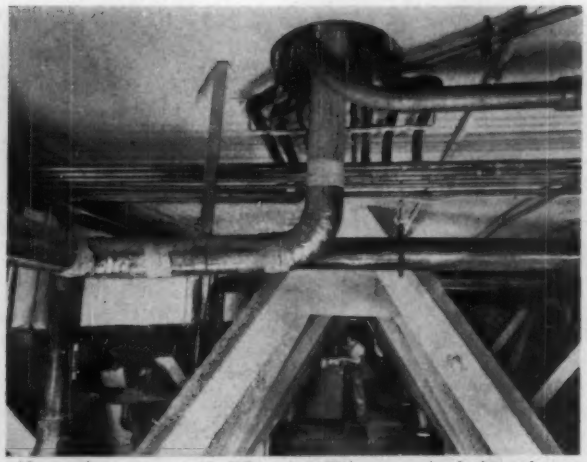
Sixty thousand sq ft out of the 150,000 sq ft on the upper floor are devoted to a "Snow-White" area where the most critical of the manufacturing and assembly processes are performed. This calls for a dust free environment with temperature accurately controlled at 75 F and relative humidity at 20 per cent. This area is isolated from the remainder of the second floor, and access can be gained only through negative pressure "air locks". The second floor is windowless except for 10-ft high slits at 63 ft intervals.

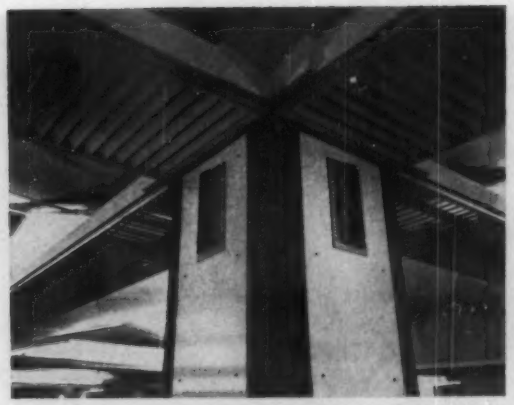
The fresh air unit serving the "Snow-White" area incorporates both electrostatic and mechanical filtration and chemical dehumidification to maintain the stringent requirements. All return air is ducted from return air grilles in the floor to the units serving this space.

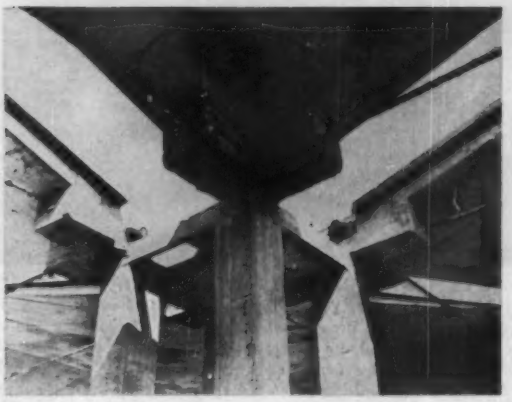
In the remainder of the building, the fresh air unit uses fiberglass filters constantly being replenished by driven rollers. Return air from these areas uses the whole space frame as a return plenum to the individual units. The lower floor has a luminous plastic ceiling in which are incorporated integral plastic diffusers of the same material.

In the non-Snow-White areas temperature is maintained at 78 F and humidity at 50 per cent.

Lighting on the manufacturing floor consists of concentric ring fixtures with reflectors containing 1000-watt, color-corrected mercury vapor lamps. The fixtures light the ceiling, giving an indirect source. They are mounted on a pendant mounted raceway which also conceals the wire-rope ties of the paraboloids.

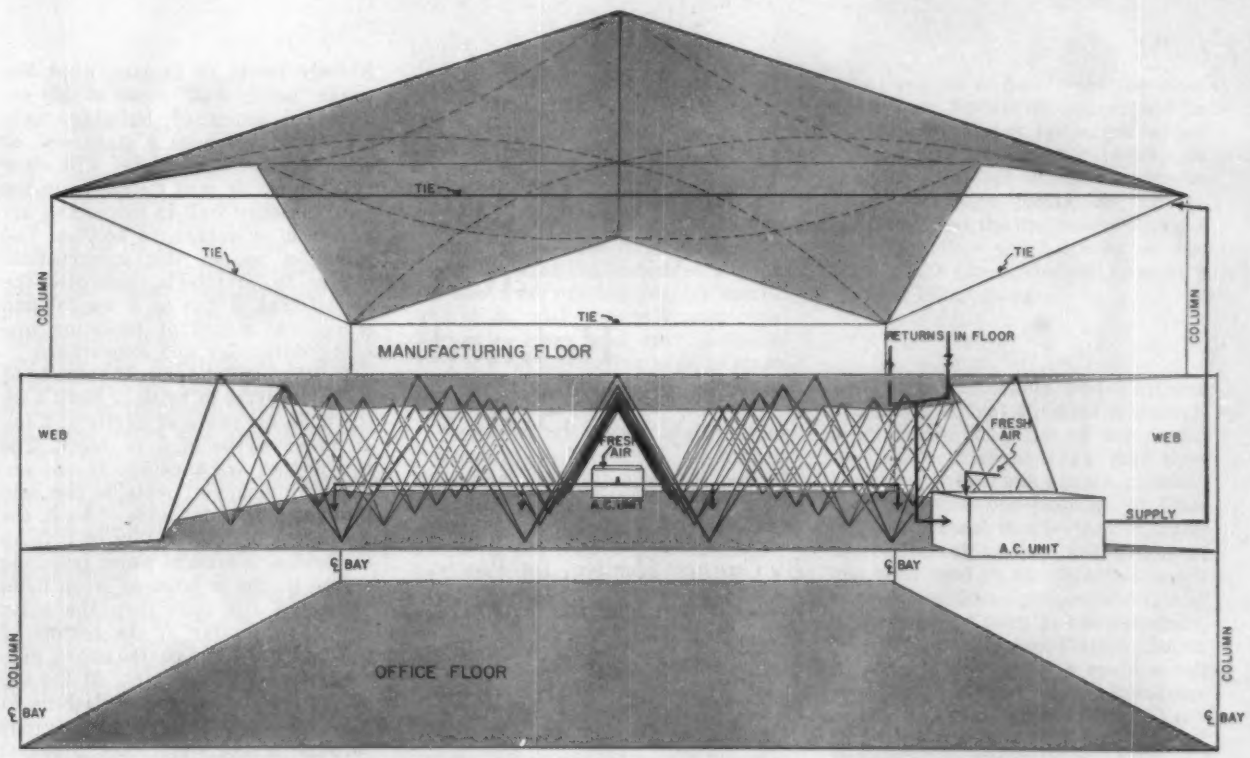




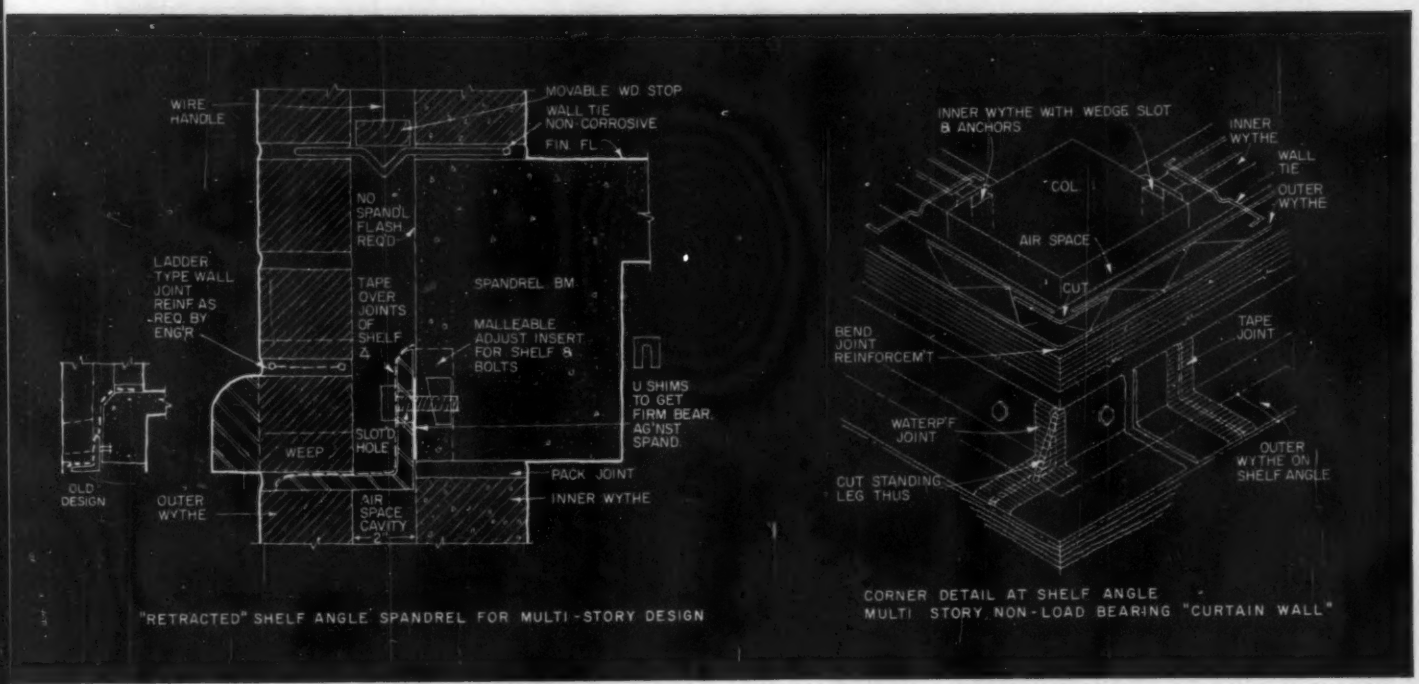


Above: As many as 16 different utilities are piped through one access hole. In a sense, space frame is a "basement" in the middle of the building. Openwork structure permits freedom of arrangement for equipment and accessibility for maintenance. At exterior, space frame has access doors to admit large equipment.
Right: Top photo shows air diffusers, directing vanes above them. The lower photograph indicates how the structurally independent shells are supported. Where four paraboloids come together in the interior, each of four columns supports one corner of a shell.

Texas Instruments, Inc., Semi-Conductor Building, Dallas, Texas. ARCHITECTS: O'Neil Ford and Richard Colley. ASSOCIATE ARCHITECTS: A. B. Swank and S. B. Zisman. CONSULTING ENGINEERING ON SHELLS: Felix Candela. CONSULTING ENGINEER, GENERAL STRUCTURE: Wallace Wilkerson. MECHANICAL ENGINEER: Thermotank, Inc. GENERAL CONTRACTOR: Robert McKie



This perspective shows one bay and takes in the area circumscribed by column centerlines. The shells have edge stiffeners and are tied by wire rope cables across the bottom of each of the four gable triangles



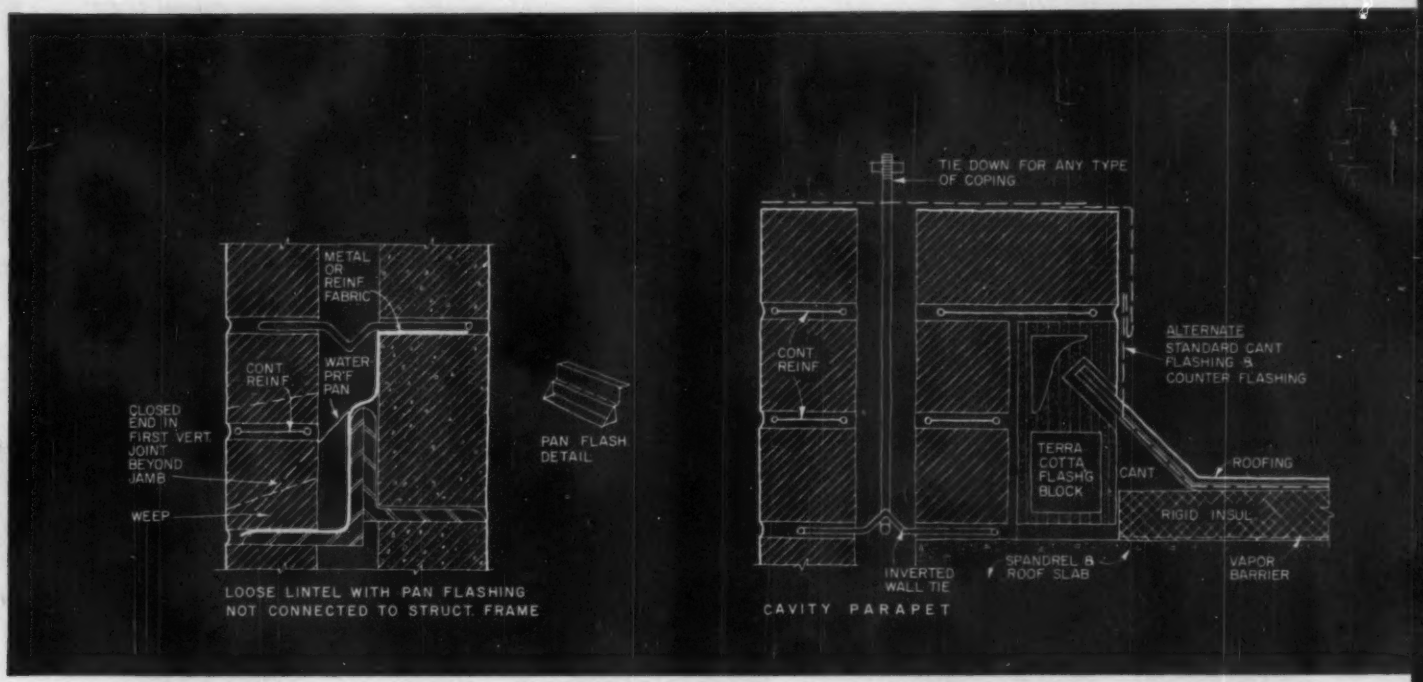
1. TYPICAL MULTI-STORY SHELF ANGLE AT SPANDREL BEAM Formerly carried on a spandrel beam that projected into the cavity. The present design, although increasing the size of the angle itself, reduces concrete by retracting the beam to the face of the column. It removes entirely the need for spandrel flashing at every story, and improves the continuity of the air space. The isometric view indicates the method of turning at outside corner and the covering of joints. To insure a clean cavity, leave a loose brick every 10 ft and flush out mortar droppings with a hose stream. Weep holes may be formed by inserting a lath strip in the joint and removing it when the wood has dried enough to loosen it. Rope loops may also be used for this purpose

Cavity Walls at a Refined Stage

By Gannett Herwig, La Pierre, Litchfield and Partners, Architects

Nobody needs to explain what the words "cavity wall" mean at this enlightened stage of building techniques, but perhaps a statement or restatement of principles will show how the cavity wall differs from the solid masonry wall in more than appearance, or rather, in section. The widening use of this construction, mostly by architects, indicates the appeal that it has as a logical and economical means of retaining masonry durability and appearance.

In its simplest form, it consists of an outer wythe of brick or block 4 in. thick, an air space or cavity of 2 in., an inner wythe of 4 in. block. The two wythes are anchored to one another by means of metallic ties laid into the horizontal joint of each, the tie having a deformation or drip in the bridge to prevent water traveling across it. Drain holes or weep holes of decent size pass thru the outer wythe, preferably at the bottom of the cavity and one course above, generally in a vertical joint. At the top of the foundation wall, a flashing at least 8 in. high, draining above grade through proper weep holes, prevents water in the cavity from entering the basement.



2. LOOSE LINTEL, PAN FLASHING Above openings that occur elsewhere than at the shelf angle, individual lintels supported at the jambs are necessary, and require a head flashing with closed ends. Generally it is made with light metal sheet folded to form the "pan," with weep holes to drain to the exterior

3. CAVITY PARAPET Parapets are to be avoided wherever possible, but the continuation of the cavity up through the parapet maintains a uniform structural and thermal stress in the exterior wythe, and prevents changes in color. Efflorescence in parapets is frequent in solid wall construction; it is virtually eliminated here

This is all there is to it!

What does the cavity wall do?

The cavity wall:

1. Conserves materials. The minimum wall, using 8 in. of masonry, gives enclosure, insulation and furring in 10 in. of thickness.

2. Separates the differential stresses of the weather-exposed outer face of the wall from the room temperature-exposed inner face; this reduces cracking and shearing as a consequence, since the ¼ in. metal ties are intended by their nature not to transmit these forces effectively from one face to the other.

3. Eliminates the header course required in solid wall work.

4. In multi-story construction, an extended shelf angle eliminates spandrel flashing.

5. The ventilation afforded by the cavity serves to reduce or entirely eliminate efflorescence, even on parapet walls, if the cavity is carried up to the coping.

Precautions

A. Respect the integrity of the cavity. Never bring the two wythes together, except through the metal drip anchors. The details show how jamb, head and sill can cross the air space safely.

B. Specify a simple method of keeping the cavity clear of brick chips (a well-modulated wall cuts bricks only in half) and mortar droppings. One method is to leave a few bricks loose at the bottom of the cavity and flush out the surplus mortar and chips with a hose stream, mortaring the loose brick later. A special trowel with a standing edge to strike the joint inside the cavity needs inventing.

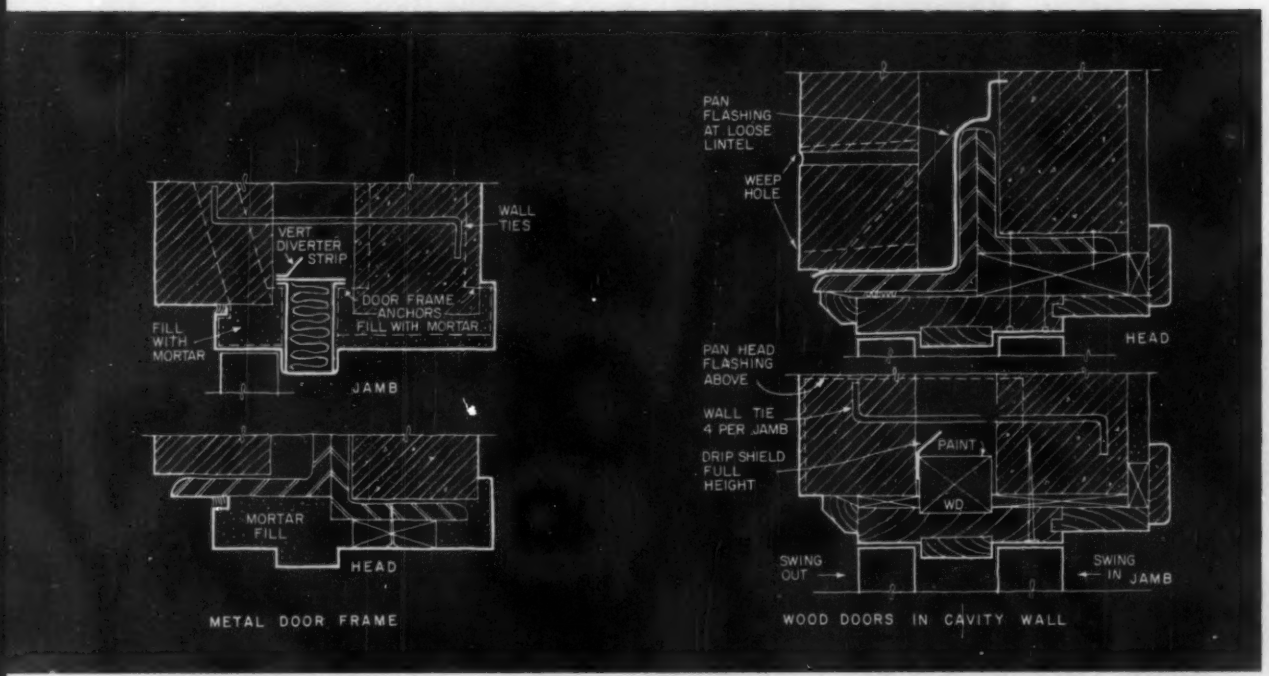
C. Do not use the air space for the concealment of conduit, piping or duct work. The air space is part of the wall—a wide joint without mortar—and the presence of "foreign" elements can only impair its ability to resist water transfer.

Appearance

The requirement of face bonding is about the only limiting factor in appearance design of cavity walls. Vertical straight lines are undesirable within the surface of the wall, except, of course, at vertical expansion joints, or at window jambs. A single molded brick can be used very effectively to project from the main surface in horizontal course and in separated patterns on larger areas.

Color changes must generally be horizontal, except at inside corners or at expansion joints, on the assumption that the designer would not care to follow the toothing of the bond on the face of the wall to make a vertical color change.

La Pierre, Litchfield and Partners (formerly Alfred Hopkins & Associates) began their use of the cavity wall as far back as 1913. And they have used it ever since in the pleasant certainty that one problem at least will not present itself—that of leaky or condensing walls above grade. It has been used in all materials, brick stone, block (even precast slabs) and in large areas, such as the one-story, 15-acre Postal Concentration Center in Long Island City; on medium tall structures like the Bellevue Residence and School for Nurses; New York City Housing Authority projects of 14 stories; and the tallest cavity wall job, the V. A. Hospital in New York, 20 stories.

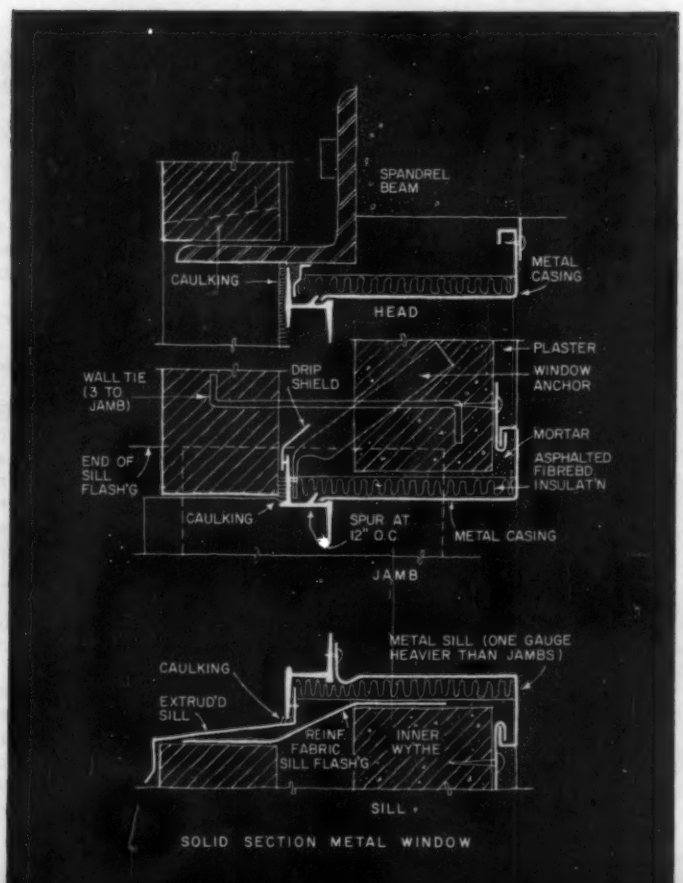


4. WINDOW AND DOOR DETAILS · **These illustrate some of the devices to cross the cavity at jamb head and sill. Note the vertical drop shield at all jambs to prevent possible free water, flowing on the inner surface, from crossing the air space. The insulated metal casing reduces condensation and heat loss, and deterioration of paint. The cavity wall principle requires independent masonry anchorage on both wythes**

Schools, prisons, churches, stores, banks, industrial structures have all come into the fold. There is no structure yet that does not seem to benefit by the notion that a wall subject to water under pressure (which is wind-driven rain) can be allowed to leak (which it will do if there is the least opening) up to an unbridgeable gap where there is no pressure, and then be led back to the exterior through channels provided for it. That the actual experience is one of no interior leaks, nor even exterior leaks (in the absence of "weeping" at the weep-holes in brick structures) serves to confirm to the designers the validity of their adherence to the idea.

The same principle, somewhat differently applied, has worked in the Arctic, where our office pioneered in prefabricated construction, and developed metal panel systems that again make a strong effort to exclude outside and inside water, but do accept inevitable infiltration under pressure, and lead it harmlessly away in paths where the pressure is removed.

GANNETT HERWIG



Why Composite Construction for Buildings?

Lower cost, longer spans and shallower beams are reasons for its use, primarily in bridges, and now in buildings. Growing recognition of these advantages is reflected in part by the current crop of technical papers, seminars and books on the subject. And perhaps more significant is the action taken by the American Concrete Institute and the American Society of Civil Engineers in setting up a joint committee, headed by Dr. Ivan M. Viest, to develop a recommended practice for designing composite buildings.

As far back as the 1920's, a floor framing system was devised that involved stringing 4 and 6 in. H-beams between building columns and pouring the concrete slab around as well as over them. The object was to combine the supporting steel frame with the slab in such a way that the concrete would add to the load-carrying capacity of the beams, rather than merely to their load. In return, the H-beams would serve as reinforcing for the slab.

Unfortunately, the system required so much shoring to prevent deflection of the small beams during construction that it proved uneconomical and eventually went out of use. But the advantages of linking slab and beams together so that the concrete reinforced the steel as well as vice versa had been recognized, and an early approach to composite design was duly recorded.

The more advanced technique that we now know as composite design was imported from Europe in the 30's. A refinement of the commonly used concrete slab-on-steel beam type of construction, it basically involves little more than anchoring the slab to the supporting members so that the whole structure deforms as a unit. The essential elements, with the exception of the ties, are already present in any steel-framed building. And by simply causing them to work together rather than independently, the strength and stiffness of the effective section can be increased without increasing the amount of steel. This, of course, means lighter sections, longer spans, or shallower beams.

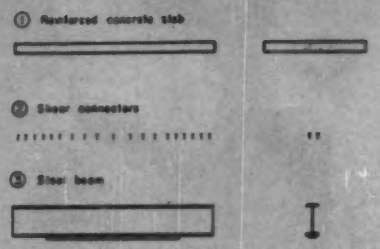
The advantages of composite construction for bridges were obvious almost immediately, and, in the quarter century since its introduction here, composite design has become firmly entrenched in the field of bridge construction. In the building field, on the other hand, composite framing is still almost a rarity. Whether this is because building loads are light and their spans short when compared to highway bridges; or because there are no standard specifications for composite construction in buildings (The AASHO issued specifications for composite highway bridges in 1944.); or simply because building designers are unaware of the economies possible with composite construction remains a matter of speculation.

Whatever the reason, it is only recently that the number of composite buildings has increased to more than a handful. Interest in the technique has grown steadily, however, and is expected to accelerate when the recommended practice now being drawn up by a joint committee of the ACI and ASCE is published next fall. (Current general practice is to follow applicable portions of the AISC code for steel buildings and the ACI code for reinforced concrete buildings.)

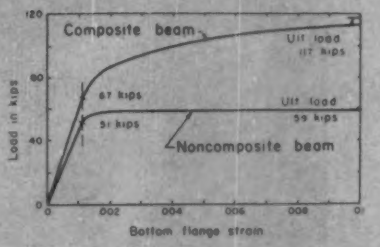
To date, composite construction has been used successfully for such widely divergent buildings types as a parking garage, an apartment house, offices and a church. The New York City consulting firm of Seelye, Stevenson, Value & Knecht, which has used composite design for several buildings, states that actual net economies have been realized in each case. At the same time they caution that, because other factors may offset the savings in steel, composite construction should not, in itself, be considered a guarantee of economy.

In general, if a building floor is to consist of a solid concrete slab on steel beams, composite design will make it possible to use lighter steel. The actual savings of course depend on the spans, the loading and, to some extent, the framing plan. On the whole, designers have found that composite construction is most economical when live loads and/or span lengths are greater than usual, and when the design is straightforward and repetitive, with relatively long, unbroken spans.

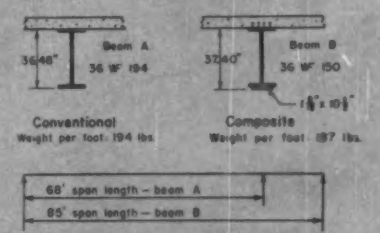
The increased efficiency of the steel in a composite section may also mean that special design requirements may be met without upping the cost of



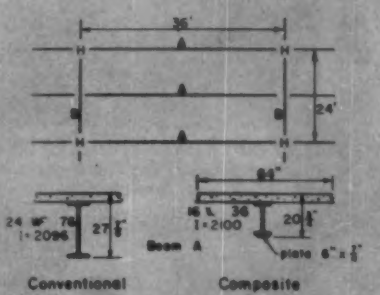
ELEMENTS OF A COMPOSITE BEAM



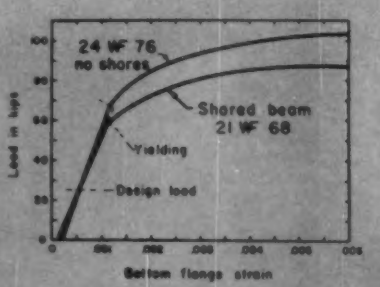
EFFECTS OF COMPOSITE ACTION



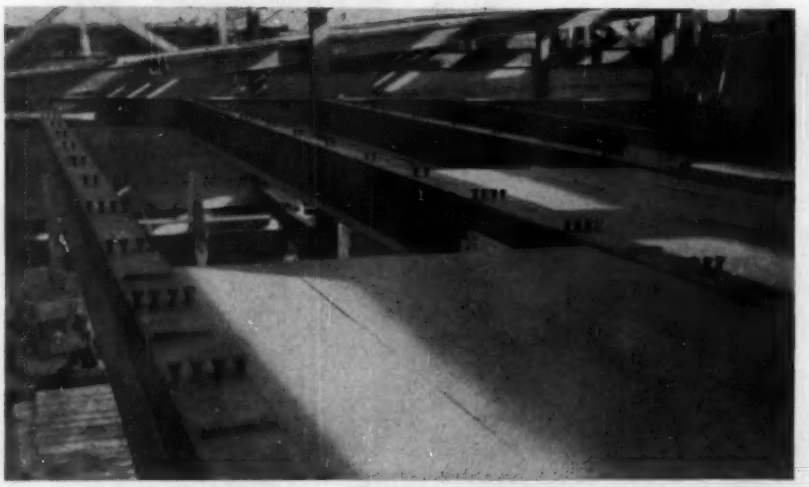
TYPICAL INCREASE IN SPAN LENGTH



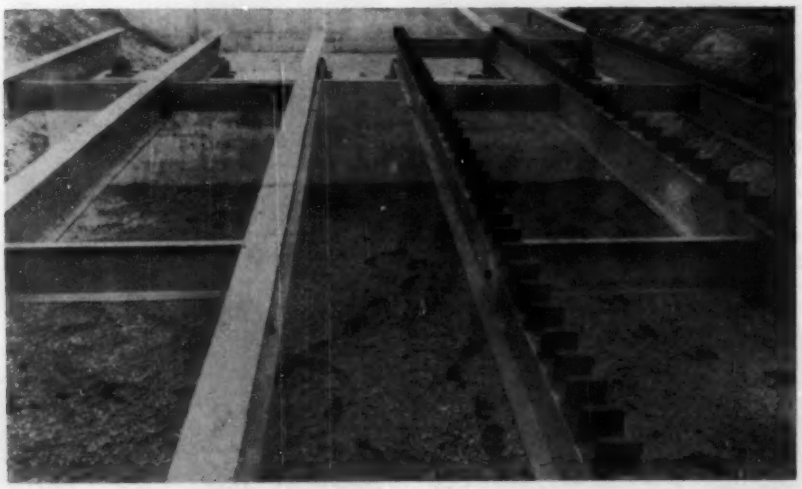
TYPICAL SAVINGS IN STEEL



EFFECT OF TEMPORARY SUPPORTS



WELDED STUD CONNECTORS. These are short pieces of round steel bar with one end welded to the beam so that the upset head provides shear connection to the concrete slab



FLEXIBLE-CHANNEL SHEAR CONNECTORS. Pieces of rolled channel set at right angles to the steel beam, and one flange welded to it are another method of providing a shear tie



SPIRAL SHEAR CONNECTORS. Tie of steel beam to concrete slab is also performed with a round bar, wound into a helix which is welded to the beam at spots where it touches

the structure. For example, if columns must be widely spaced, standard rolled sections may be used for longer spans than would be possible with a noncomposite member of the same weight and depth. Or, given identical span lengths and loadings, the depth of a composite beam may be considerably less than that of its noncomposite counterpart. In some instances, this may mean only a simplified layout for duct-work and other mechanical equipment within the floor-ceiling sandwich. In others, it may mean that an extra story can be squeezed in under the building height limitation.

All of these advantages are dependent on the choice of the composite section, and the interaction of its three basic elements: the concrete slab, the steel beam, and the shear connectors that tie them together. Design of the reinforced concrete slab, whose function is essentially that of a compression cover plate, is carried out in the same way as for noncomposite slab-and-beam construction. Its effective width is governed by the code provisions for the flange of concrete T-beams. Once this has been determined, the transformed section can be found, and the design proceeds as for a monolithic section.

Rolled sections are usually used in composite beams, although built-up members may prove more economical in some cases. When rolled beams are selected, the bottom flange is often reinforced with a cover plate. This balances the slab, lowers the neutral axis, and results in a more efficient use of steel.

In buildings, temporary shores are often used to support the slab until the concrete reaches the required strength, in which case it may be assumed that all loads are carried by the composite section. Otherwise, the steel beams must be sized to support not only their own weight but also that of the forms and the concrete during casting and curing of the slab. Since these loads may account for from one quarter to one half of the total, the use of shoring may permit a significant reduction in the weight of the steel.

However it has no effect on the ultimate capacity of the composite beam, which is of course reduced by an amount corresponding to the reduction in steel. Both composite and noncomposite beams are designed for the same working stress based on first yielding. But the composite beam has a far greater proportion of its ultimate strength still available after first yielding than the non-composite beam.

Because this reserve capacity is not utilized in the working load design,

Air Survey Gives "Birds-Eye View" of Proposed Store Sites



Annotated photo-maps of proposed trade area pinpoint residential areas, driving time isochrons, competing stores and new construction



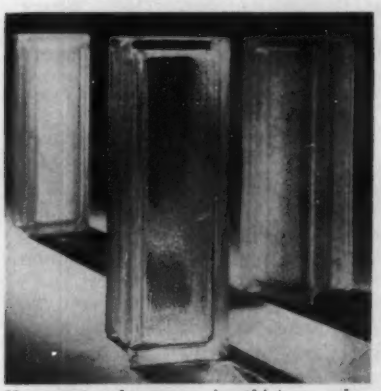
Soils data given for numbered areas on proposed site includes type of soil, depth to bedrock, drainage and bearing capacity

Much of the information needed to properly locate and plan new shopping centers or similar developments can be obtained quickly and inexpensively by surveying proposed sites from the air. So says the Aero Service Corporation of Philadelphia, which is now offering, in addition to other types of air surveys, a new store siting service for planners and developers of shopping centers covering five acres or more.

Designed to give a rapid evaluation of proposed sites through the use of aerial photography and photogrammetric principles, the survey provides the planner with marketing data, soil studies, and detailed topographic maps—all of which can be obtained by aerial methods for about 75 per cent of the cost of an equivalent ground survey.

When properly interpreted, the overlapping air-photos and photomosaics yield a wealth of useful economic data on the proposed trade area. They record, for example, the size, type and number of nearby dwellings, the extent of undeveloped areas, the number and condition of roads and highways, driving distances to market centers, and other helpful gauges of the potential market—without arousing local curiosity or land speculation.

Photo analysis is also used to determine soil and foundation conditions at the proposed site, thus giving an accurate preview of grading and excavation problems without extensive field checks. (If previous survey data for the general area is unavailable, the results of the photo analysis are corroborated by a limited ground investigation.) *Aero Service Corporation, 210 East Courtland St., Philadelphia 20, Pennsylvania.*



New rectangle comes in thirteen colors

New Shades, New Shape for Glass Block

Pittsburgh Corning's systematic glamorization of glass block took two strides forward this month with the introduction of a slim rectangular unit—the first departure from the traditional square shape in two decades—and the addition of several new colors to the *Color Glass Block* line brought out last year.

The new 4 by 12 in. block, designed for use alone or in combination with standard 6, 8 and 12 in. squares, is available plain as well as with a white fibrous divider or the blue-green *Suntrol* screen. Like the other standard units, including the 6-in. square, it can also be had with the new ceramic color finishes chosen in consultation with Harvard's Graduate School of Design. These new shades, richer and deeper than the pastels now on the market, include blue, green, red, yellow and orange as well as black and white. Two more restrained colors, walnut and charcoal, have been introduced in the 8-in. size only. *Pittsburgh Corning Corp., One Gateway Center, Pittsburgh 22, Pa.*

more products on page 282



Hints for Better Elevatoring **outlines and discusses the fundamental considerations which influence the planning of vertical transportation systems for various types of buildings. General coverage of such topics as building layout and structural requirements, elevator arrangement, operating systems, and supervisory systems is supplemented by detailed discussion of factors to be considered in providing elevator systems for specific building types—office buildings, retail stores, apartment houses, hospitals, hotels and industrial buildings. Typical layouts, traffic flow charts and similar graphic information is provided for each. 32 pp.** ***Otis Elevator Company, 260 Eleventh Ave., New York 1, N. Y.***

Multi-Pattern Air Diffusers

Contains compact selection tables, performance charts and engineering data for the *MP* series of multi-pattern square and rectangular air diffusers. 64 pp. $1.50 *Universal Diffuser Corp., 38 Marbledale Rd., Tuckahoe, N. Y.*

Laboratory Centrifuges

Catalogs seven-model line of laboratory centrifuges. 12 pp. *Chicago Surgical and Electrical Co., 3070-82 W. Grand Ave., Chicago 22, Ill.*

"Family-Proof" Plywood Paneling

Covers complete line of Georgia-Pacific factory-finished and textured plywood paneling. 12 pp. *Dept. 13-A, Georgia-Pacific Corp., Equitable Bldg., Portland 4, Ore.**

The University Technilog

. . . on Loudspeakers contains design and product information, and specifications. 64 pp. $1. *University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.**

Westinghouse Lighting Handbook

New edition of comprehensive lighting design manual first published in 1941 includes information on distribution and light measurements, a revised section on light sources, information on coefficients of utilization and maintenance factors, and tables of recommended lighting levels. The 256 page manual also contains chapters on interior wiring, school and office lighting, industrial and architectural lighting, floodlighting design, street and sign lighting, and lighting economics. $3. *Westinghouse Lamp Div., Bloomfield, N. J.**

I-T-E Speedfax Catalog

Contains complete pricing, dimensional and application information on I-T-E line of molded case and large air circuit breakers, as well as general descriptions of the company's switchgear products. 56 pp. *I-T-E Circuit Breaker Co., 19th and Hamilton Sts., Philadelphia 30, Pa.**

Central Station Air Conditioning

(A.I.A. 30-F-2) Contains photos, engineering drawings, construction details, dimensions, performance tables and other information on *Marlo* central station air conditioning units. 50 pp. *Marlo Coil Co., 7100 S. Grand Ave., St. Louis 11, Mo.**

Large Volume Hot Water Supply

(A.I.A. 30-C-1) Includes selection and application data and specifications on Federal's *FTHW* and *FM-HW* series of hot water supply heaters. 6 pp. *Federal Boiler, Midland Park, N. J.*

Electric Heating (A.I.A. 31-A)

Contains architectural drawings and specification data as well as complete wiring and mounting directions for wall heaters, thermostats and *Vectoray* baseboard heaters. 14 pp. *Swan Mfg. Co., 1801 W. 26th St., Vancouver, Wash.*

Evaluating Your Science Facilities

Science Guide emphasizes mechanical and statistical data on planning and construction of science classrooms and school laboratories, with a master check list of recommended facilities. *Scientific Apparatus Makers Assn., 20 N. Wacker Dr., Chicago 6, Ill.*

Outdoor Lighting Fixtures

Describes, illustrates and gives specifications for complete line of outdoor lighting equipment, including lampholders, luminaires and accessories. 100 pp. *Magni-Flood, Inc., 50 Crary Ave., Mount Vernon, N. Y.*

Heating-Cooling Conditioner

Bulletin B-2001-B gives selection, rating and installation data on the *Riviera* line of single unit conditioners. 28 pp. *Warren Webster & Co., Dept. 6, Camden 5, N. J.*

Super/Air-Van in Fiberglas

Six page brochure contains complete information, including performance and dimensional data, on reinforced *Fiberglas* power roof exhausters. *The Gallaher Co., 4108 Dodge St., Omaha 31, Nebr.*

Teco Products and Services

Offers up-to-date information and specification data on *Teco* products. *Timber Engineering Co., 1319 18th St., N. W., Washington 6, D. C.**

Why and Where

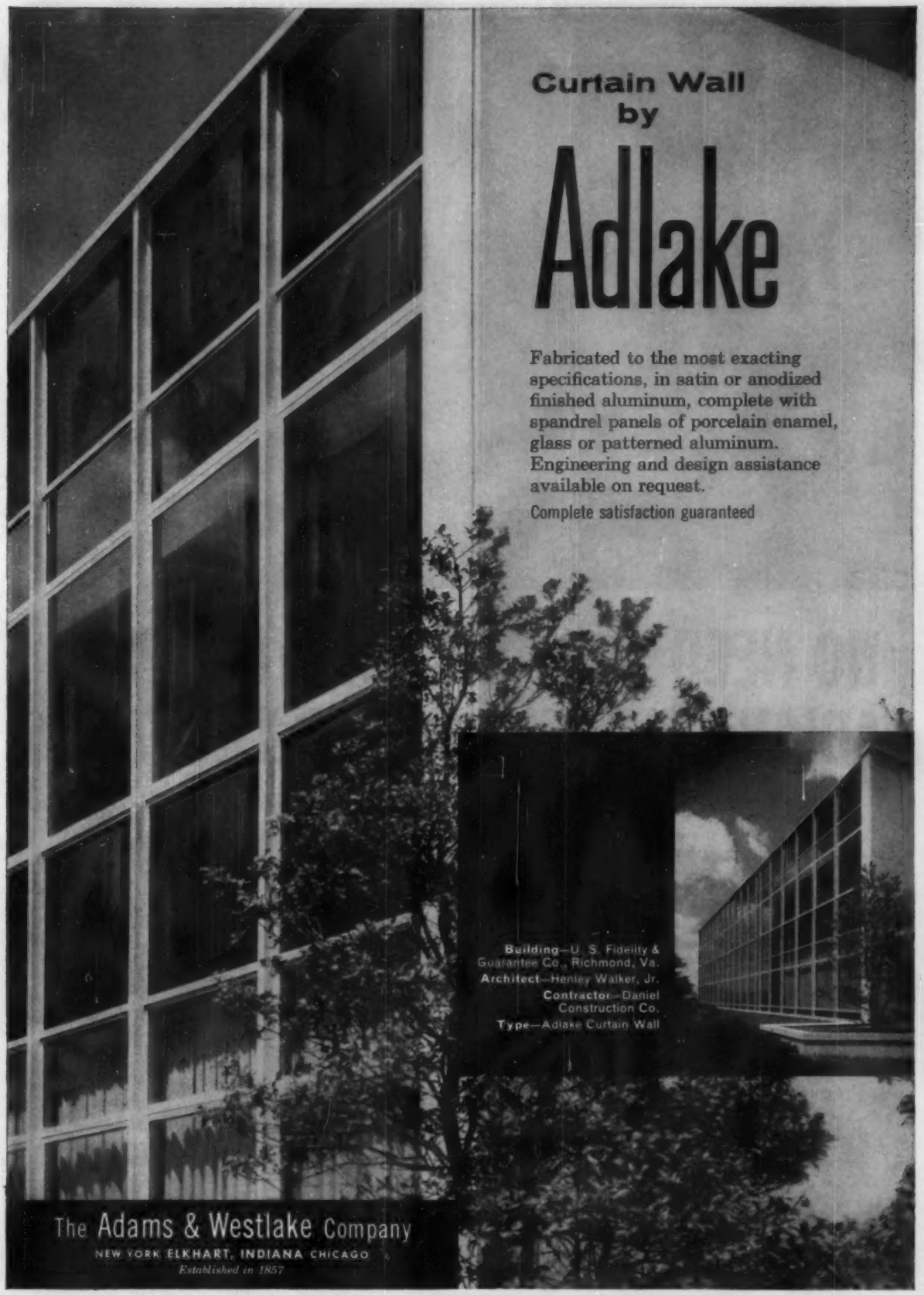
. . . to Specify Latex Paint (A.I.A. 25-G) Reviews the development of, and suggests minimum standards for, latex paint; discusses performance characteristics of interior and exterior formulations; tells where and where not to use them; and provides a glossary of basic terms. 18 pp. *The Dow Chemical Company, Midland, Mich.**

Commodity Windows and Screens

(A.I.A. 16-E) Includes specifications, and construction and installation details, as well as complete descriptions of *Ceco* commodity type windows and screens in aluminum and steel. 40 pp. *Ceco Steel Products Corp. 5601 W. 26th St., Chicago 50, Ill.**

**Additional product information in Sweet's Architectural File, 1958*

more literature on page 304


Curtain Wall
by
Adlake
Fabricated to the most exacting specifications, in satin or anodized finished aluminum, complete with spandrel panels of porcelain enamel, glass or patterned aluminum. Engineering and design assistance available on request.
Complete satisfaction guaranteed
Building—U. S. Fidelity & Guarantee Co., Richmond, Va.
Architect—Henley Walker, Jr.
Contractor—Daniel Construction Co.
Type—Adlake Curtain Wall
The Adams & Westlake Company
NEW YORK ELKHART, INDIANA CHICAGO
Established in 1857



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In true radiant heating, *steel pipe* heating coils are usually embedded in the floor itself, providing safe, gentle, permeating warmth. All over the country new schools are incorporating *steel pipe* radiant systems for this sun-like heat . . . without hot or cold spots, drafts, or dust-laden currents.

Steel pipe is, of course, preferred for all forms of hydronic heating . . . proved in three-quarters of a century of use.

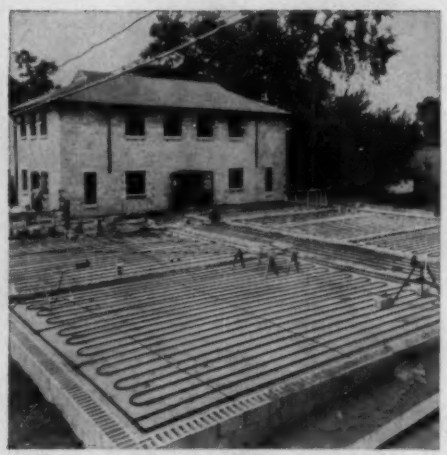
As in hydronic heating, *steel pipe* has hundreds of other applications because it is not only the least expensive but also the most versatile of metal tubular products. That's why it is the most widely used pipe in the world . . . for radiant heating, snow melting, refrigeration, fire sprinkler systems, vent and drainage lines, electrical conduit, structural uses, gas, oil and water lines.

Write for the free 48 page color booklet "Radiant Panel Heating with Steel Pipe."

STEEL PIPE IS FIRST CHOICE

- Low cost with durability
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Steel Pipe radiant heating grids being installed in four-room school addition for uniform, healthful heat.

COMMITTEE ON STEEL PIPE RESEARCH

AMERICAN IRON AND STEEL INSTITUTE

150 East Forty-Second Street, New York 17, N.Y.

DESIGN OF SOLAR SHADING: 1—Shading Masks

*From a report by Princeton University School of Architecture for Committee of Stainless Steel Producers, American Iron and Steel Institute**

SUN PATHS

Location of the sun for any time of day can be found by use of the "sun-path diagram," (right, bottom) which shows the sky-vault (right, top) projected onto the horizon plane. On such a diagram the horizon line appears as a circle at the outside edge, with the sun-paths as curved lines. Only paths during the solstices and the equinox are drawn in this case. Connecting lines indicate the hours where the sun is at the given time. Thus the sun's position can be determined at any time by its bearing angle from the south point (on the perimeter of the diagram) and its altitude angle by means of an equally graduated scale measured from the center point.

The sun's paths will change according to the latitude of the location in question. Therefore a series of such diagrams will be required for various latitude ranges.

SHADING MASKS

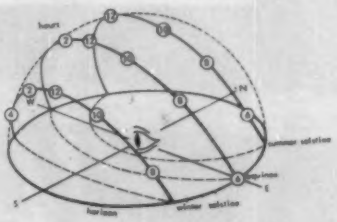
Shading devices can be plotted in the same manner as sun-paths to show during what time sun is excluded (see below). Here so-called "shading masks" are used. They are projections of the surface covered on the sky vault, as seen from an observation point at the center of the diagram. These projections also represent those parts of the sky vault from which no sunlight will come; if the sun passes through such an area, the observation point will be shaded.

Any building element will define a characteristic form in these projection diagrams, which we know as "shading masks." Masks of horizontal shading devices (overhangs) will show a segmental character; those of vertical fins produce a radial pattern; and masks of eggcrate types, are basically a combination of these forms. A shading mask can be drawn for any shading device, even for very complex ones, by simple geometrical methods. Since they are geometrical projections, they are independent of latitude and orientation, and may be used in any location.

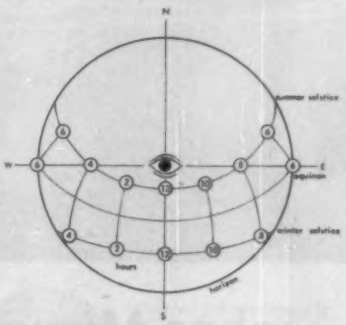
By overlaying a shading mask in the proper orientation on the sun-path diagram, one can read off immediately the times when the sun's rays will be intercepted.

For design purposes, the process can be reversed. One can determine the needed shading mask and then find the proper shading device for it.

SUN-PATHS AND THEIR PROJECTIONS



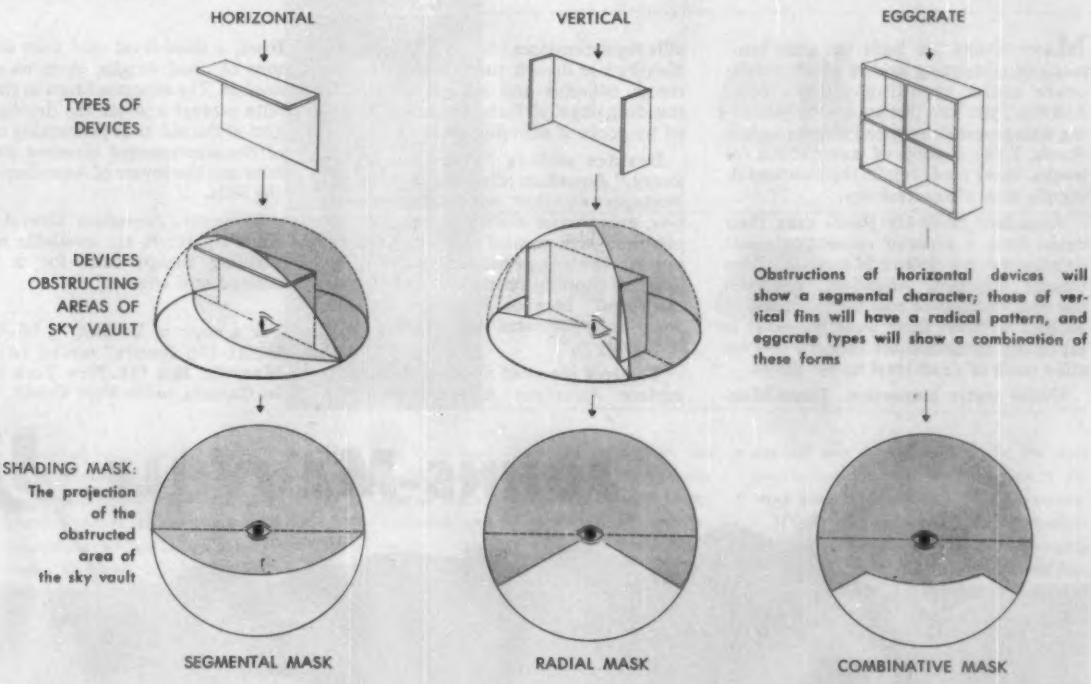
Half-sphere of the imaginary sky vault with sun paths. The projections of the sun paths are shown in dashed lines on the horizontal plane



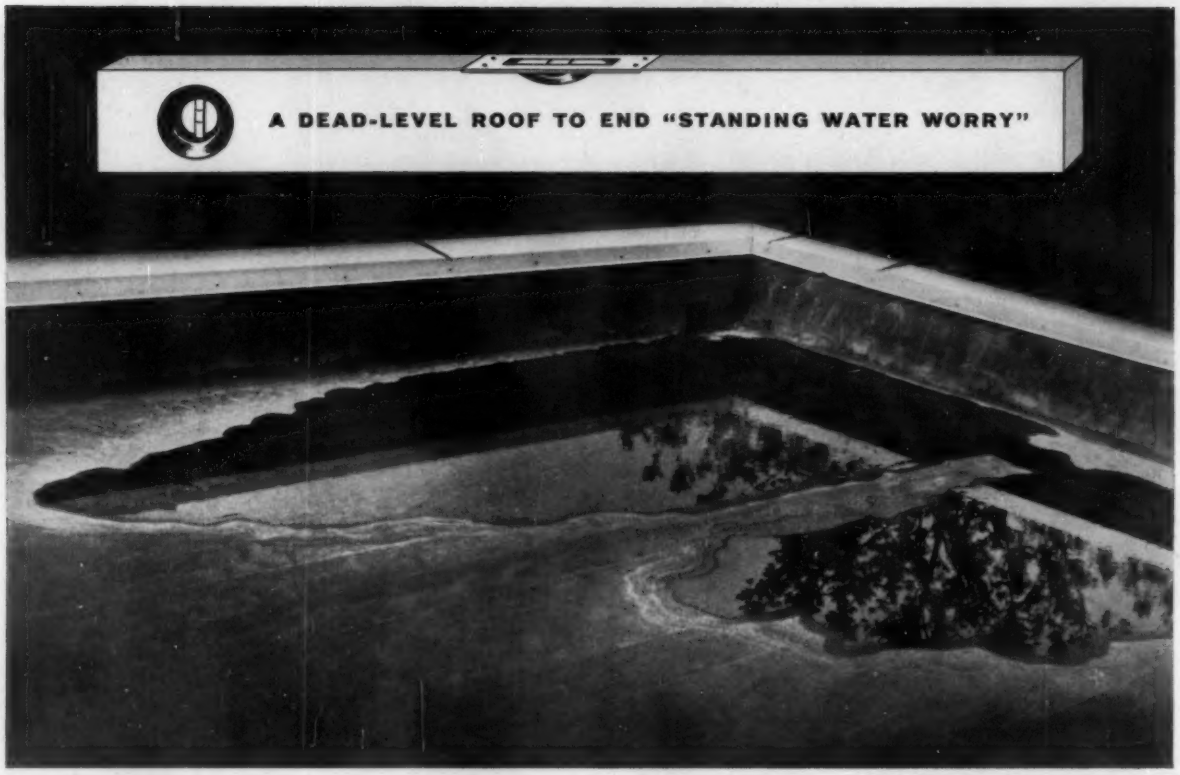
Projected diagram of the sky vault called "sun path diagram"

*THERMAL BEHAVIOR OF METAL CURTAIN WALLS. Study No. 6 in the investigation of the use of Stainless Steel in Curtain Wall Construction, based on studies by Victor Olgyay, Research Associate and Associate Professor, Princeton University and Aladar Olgyay, Architect

SHADING MASKS



Obstructions of horizontal devices will show a segmental character; those of vertical fins will have a radical pattern, and eggcrate types will show a combination of these forms



Johns-Manville *Aquadam* Built-Up Roofs

pay off in longer roof life and maximum protection

MANY ROOFS are built up with bitumens or cementing agents which deteriorate under standing water. Now, however, you can put an end to "standing water worry" by specifying Aquadam Roofs. Even if pools of water stand for weeks, these roofs retain their outstanding physical characteristics.

Aquadam Built-Up Roofs take their name from a superior cementing agent developed by Johns-Manville. This unique bitumen, Aquadam, possesses the best features of coal tar pitch and of asphalt without their weaknesses. It is especially produced for modern low incline roofs of dead-level to ½" per ft.

Under water immersion, Johns-Manville Aquadam does not swell, hummock, discolor nor does it turn cheesy. It continues adhesive and cohesive. Its outstanding physical features are not harmed by pools of standing water.

Besides ending "standing water worry," Aquadam offers these other advantages: excellent self-healing properties; exceptional ability to expand and contract with normal deck movement; proven weather resistance under wide-ranging climatic conditions and "superior bond" because Aquadam spreads, wets and saturates the roofing felts uniformly.

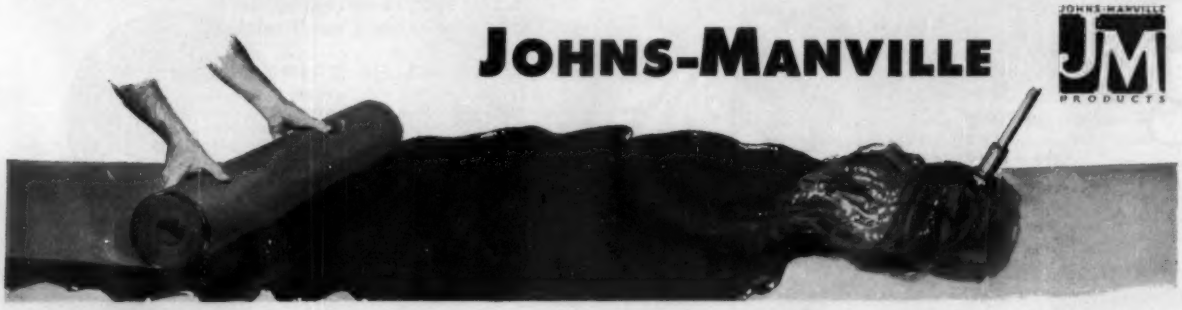
The roof pictured above is a smooth-surface Aquadam Asbestos Built-Up Roof, a dead-level roof that eliminates tons of dead weight, since no gravel is needed. The asbestos fibers in the roofing felts protect against the drying-out action of the sun thus preventing oxidation of the impregnated bitumen within the felts and the layers of Aquadam between the felts.

However, Aquadam Gravel or Slag Built-Up Roofs are available when the building design calls for a light or colored roof effect.

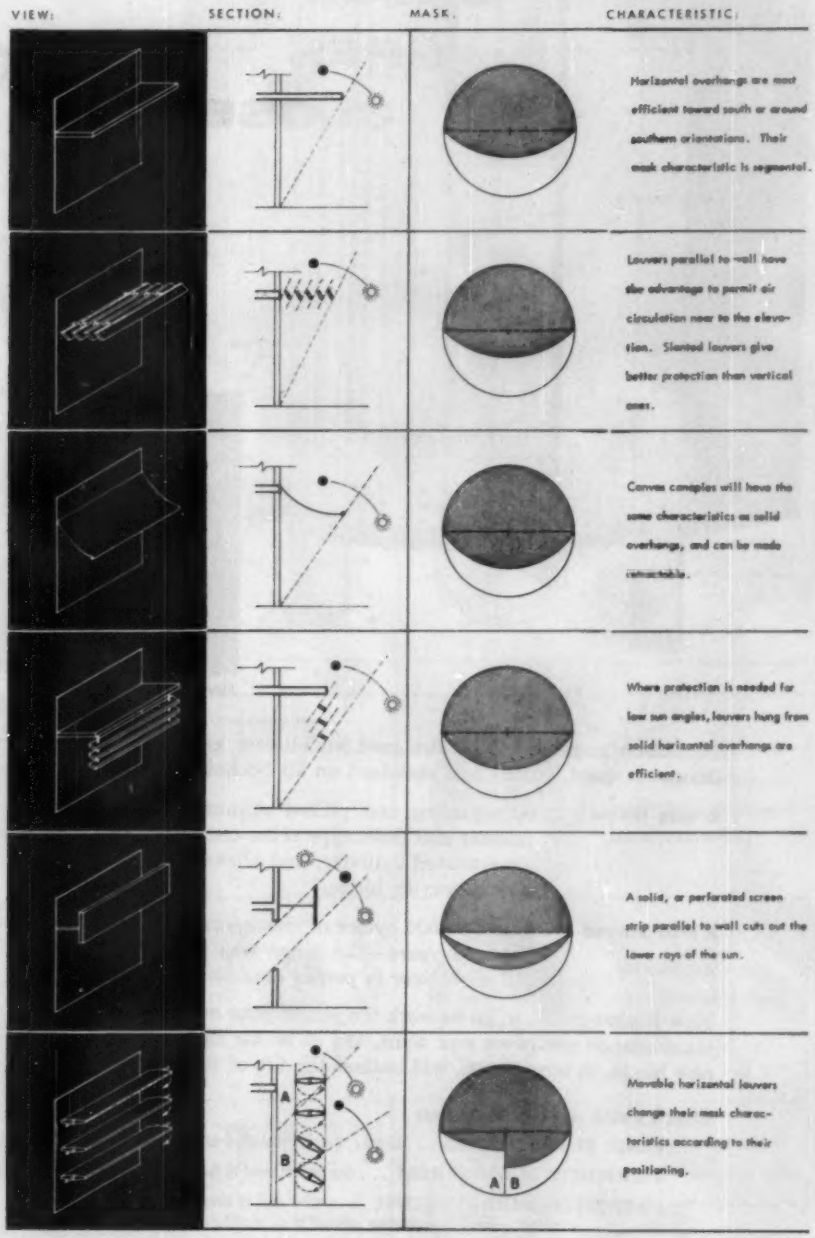
For a copy of booklet "J-M Aquadam Built-Up Roofs" write to: Johns-Manville, Box 158, New York 16, N. Y. In Canada, write Port Credit, Ontario.

JOHNS-MANVILLE

JOHNS-MANVILLE JM PRODUCTS



DESIGN OF SOLAR SHADING: 2—Types of Devices

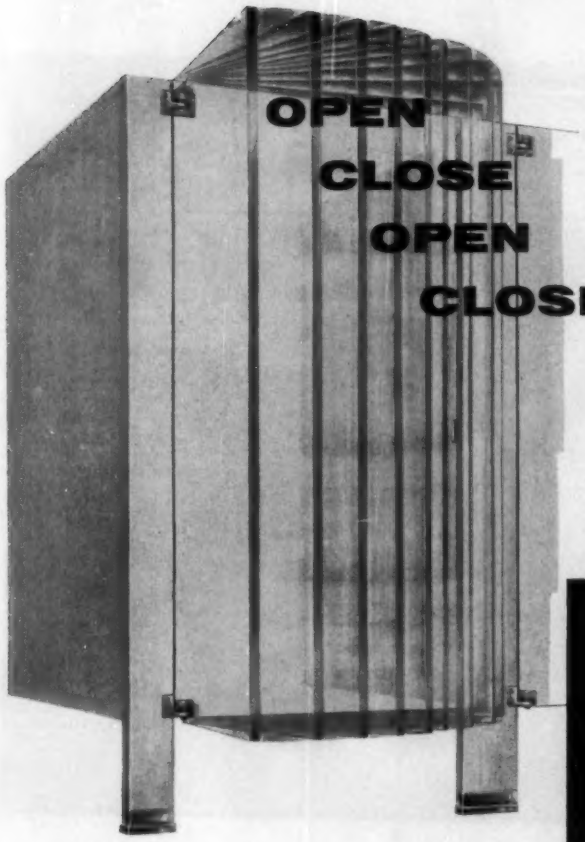


General rules can be deduced for the types of shading to be used for different orientations. Southerly orientations call for shading devices with segmental mask characteristics, and horizontal devices work in these directions efficiently. For easterly and westerly orientations vertical devices serve well, having radial shading masks. If slanted, they should incline toward the north, to give more protection from the southern positions of the sun. The eggcrate type of shading works well on walls facing southeast, and is particularly effective for southwest orientation. Because of this type's high shading ratio and low winter heat admission, its best use is in hot climate regions. For north walls, fixed vertical devices are recommended but their use is needed only in hot regions. In the very low latitudes (under 23°) horizontal devices work well also for this orientation.

Whether the shading devices be fixed or movable, the same recommendations apply in respect to the different orientations.

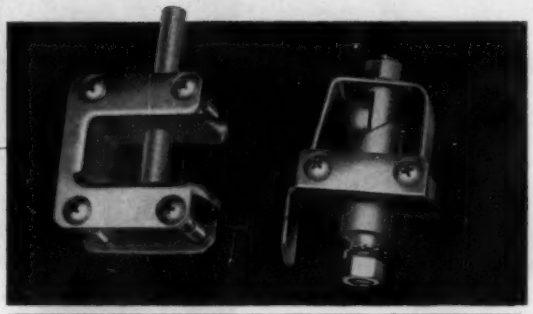
The movable types can be most efficiently utilized where the sun's altitude and bearing change rapidly: on the east, south-

Continued on page 255



CLOSE . . . . 20 times a day for 52 years

—*and still No Sign of Wear*



NEW NICHOLSON CONCEALED GRAVITY HINGE and RECESSED PIVOT

Nicholson engineers have designed an all-new gravity-type concealed hinge for toilet partition doors . . . quiet, sturdy and standard on all Nicholson compartment doors.

It was tested . . . by mounting one, picked at random from Nicholson's production line, on a 1¼" pilaster and flush-type toilet enclosure door. The door was opened quickly by an air-actuated cylinder, and allowed to close smoothly and silently by the action of the gravity hinge.

It was proved . . . after 380,000 cycles of this operation—the equivalent of 20 times a day for more than 52 years—the hinge was removed, disassembled and carefully examined. *All parts were in perfect condition, without any signs of wear or fatigue.*

Now it's ready . . . to go to work for you in your newest project . . . to provide the long life and low maintenance assurance you want. We go so far as to say that on the basis of the test results, this new hinge, in normal use, will outlast the life of the toilet compartment itself.

Check these special features:

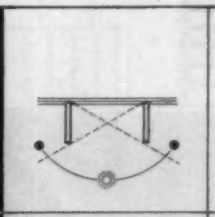
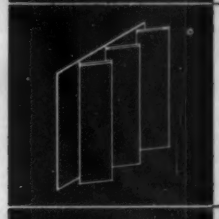
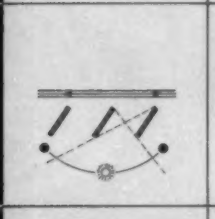
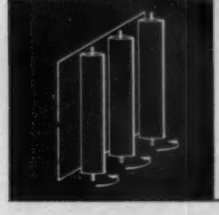
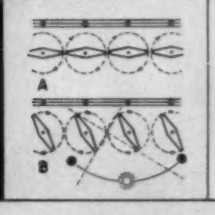
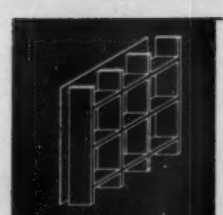
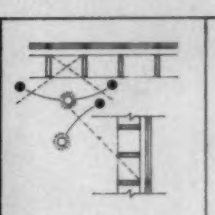
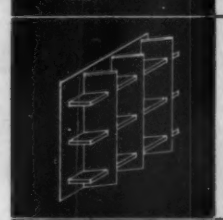
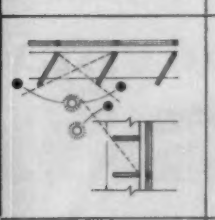
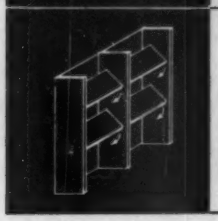
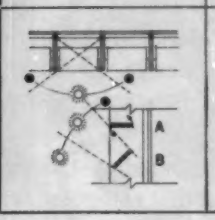
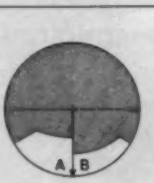
- **EASE OF INSTALLATION** . . . simply, quickly installed as a complete unit during erection at site. Easy-to-follow directions.
- **SIMPLICITY OF ADJUSTMENT** . . . one adjustment to return door to desired position. No need for special tools.
- **ARCHITECTURALLY ATTRACTIVE** . . . entire unit is concealed inside the door panel . . . no projection below the bottom edge of the panel . . . protection against dust, moisture and vandalism.
- **STRUCTURALLY SOUND** . . . hinge is an integral part of the door panel structure. Curled ends of hinge column strap butt solidly against the inside of the panel to provide additional rigidity. Panel cannot bend inward when hex bolts are tightened.

***Specify:* W. H. Nicholson and Company, 12 Oregon St., Wilkes-Barre, Pa.**

NICHOLSON

of Wilkes-Barre, Pa.

DESIGN OF SOLAR SHADING: 3—Types of Devices

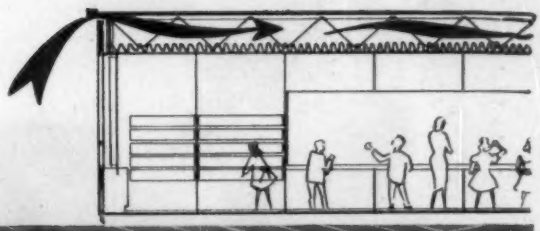
	VIEW:	PLAN AND SECTION:	MASK:	CHARACTERISTIC:
VERTICAL TYPES				Vertical fins serve wall toward east and west and near these orientations. Their mask characteristic is segmental.
				Vertical fins oblique to wall will result in asymetrical mask. Separation from wall will avoid heat trasmission.
				Movable fins can shade the whole wall, or open-up in different directions according to the sun's position.
EGGCRATE TYPES				Eggcrate types are combinations of horizontal and vertical types and their mask is a superimposed diagram of the two masks
				Solid eggcrate with slanting vertical fins results in asymetrical mask
				Eggcrate device with movable horizontal elements shows flexible mask characteristics. Because of their high shading ratio, eggcrates are efficient in hot climates.

east, and especially, because of the afternoon heat, on the southwest and west.

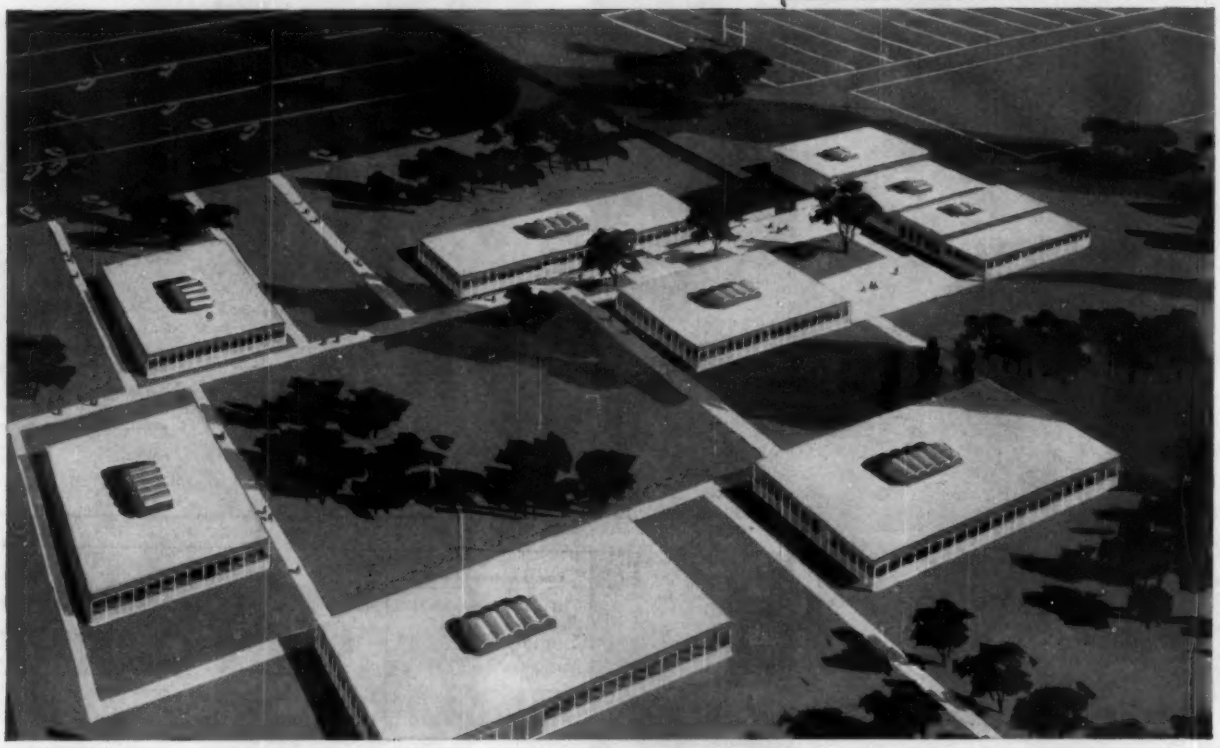
The illustrations on Sheets 2 and 3 show a number of basic types of devices, classified as horizontal, vertical and eggcrate types.

The dash lines shown on the section diagram in each case indicate the sun angle at the time of 100 per cent shading.

The shading mask for each device is also shown, the extent of 100 per cent shading being indicated by the gray area.



Campus plan provides several classroom units plus gymnasium, cafeteria, auditorium, and other specialized facilities. Heating for all buildings is "powered" from a central steam plant working through hot water converters in the individual buildings. Air conditioning can be added on a building-at-a-time basis.



Number five of a series . . .

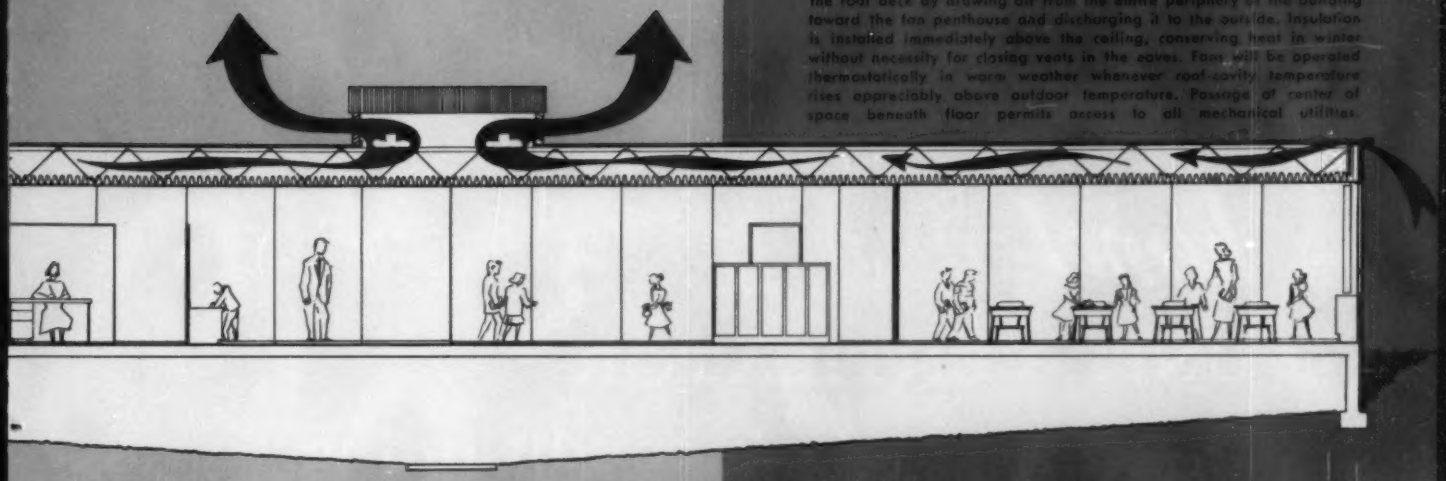
The herman nelson file of



CLASSROOM AIR CONDITIONING more and more is becoming an important factor in school design. Architects everywhere are recognizing the trend in their structural considerations for school buildings.

Educators, too, are thinking—talking—stressing air conditioning. They have found that classroom temperature, air movement and humidity have a direct bearing on learning and development. They realize that it is just as important that a child be comfortable in hot weather as in wintertime.

For these reasons, many schools are already air conditioned, or are planning for it in the future. Throughout the country, the need for air conditioning is being reflected again and again in basic school design. The building plan shown on these pages is an outstanding example.

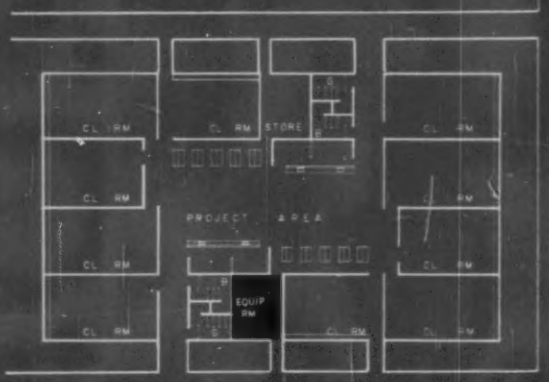


Open-truss roof construction makes it possible to cool the underside of the roof deck by drawing air from the entire periphery of the building toward the fan penthouse and discharging it to the outside. Insulation is installed immediately above the ceiling, conserving heat in winter without necessity for closing vents in the eaves. Fans will be operated thermostatically in warm weather whenever roof-cavity temperature rises appreciably above outdoor temperature. Passage at center of space beneath floor permits access to all mechanical utilities.

Michigan architects prove air conditioning compatible with campus-plan school

This unique school is another outstanding example of architectural design innovations for air conditioned schools. Provision for future air conditioning was an important part of the planning in the design of this campus-plan high school near Lansing by Laitala & Nuechterlein Associates.

Penthouse fans draw air from the entire periphery of the building through the open-truss roof. This forms a cooling "shield" against roof solar heat gain by eliminating thermal lag in roof insulation, results in smaller chillers, lower operating costs.

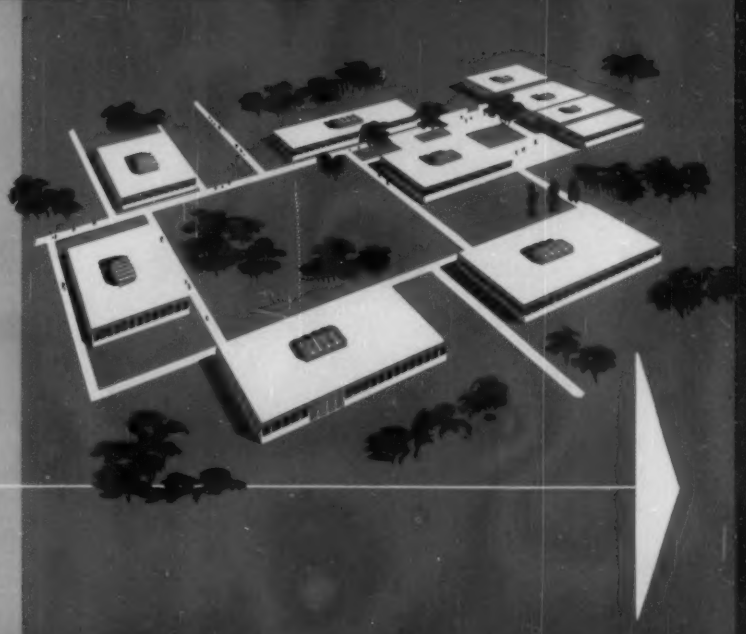


Typical teaching unit places ten classrooms around central project area, along with necessary toilets, administration and conference spaces. Demountable partitions can be rearranged to meet changing educational requirements. Equipment room is located on outside wall for possible addition of free-standing cooling tower when summer air conditioning is added.

air conditioned school design

A central steam plant supplies all of the building units—classroom buildings, gymnasium, cafeteria, auditorium—with steam. The steam is converted to hot water by converters in each of the individual buildings. Air conditioning can be added in any of the buildings at any time simply by installing chillers in the individual equipment rooms.

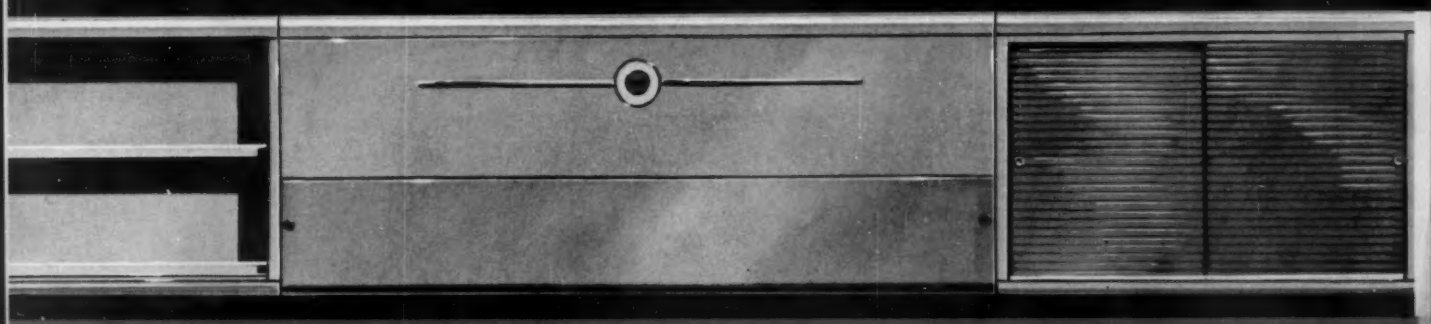
Flexibility is another important design feature of this school. The various buildings are subdivided with demountable partitions and can be modified to keep pace with changing conditions. Piping system is designed so that the air conditioning unit ventilators are equally flexible.



AAF herman nelson

hernel-cool II

UNIT VENTILATOR
with optional air conditioning



already selected by more than ~~100~~ 150 schools

Will the school you are planning *ever* need air conditioning? The answer is definitely—yes. Architects and educators agree on the importance of the proper learning environment. And only air conditioning can assure that your school will have it when the weather outside is warm.

That's why today—less than a year after its introduction—the HerNel-Cool II unit ventilator with optional air conditioning has been selected for use in more than 150 schools, which are either air conditioned now or have planned for it.

HerNel-Cool II is the first unit ventilator to offer optional air conditioning, as well as heating, ventilating and natural cooling (with outside air). Units can be installed so the school enjoys the usual benefits of Herman Nelson unit ventilation, including the famous DRAFT|STOP system—*the only type of draft control that is compatible with air conditioning*. Then at any time—immediately, or whenever the school budget will allow it—the more addition of a chiller in the boiler room is all that is needed for complete hot weather air conditioning.

This can be accomplished without disruption of classroom activities . . . without expensive alteration and installation charges. The cost is far less than for separate heating and air conditioning systems—both for installation and operation.

Want information? Write today to Herman Nelson Unit Ventilator Products, **American Air Filter Company, Inc., 215 Central Ave., Louisville 8, Ky.**

AAF

herman nelson

UNIT VENTILATOR PRODUCTS

System of Classroom Cooling, Heating and Ventilating

JUST HOW MUCH DOES PROVISION FOR FUTURE CLASSROOM AIR CONDITIONING COST? The answer is: probably far less than you think—when you install HerNel-Cool II air conditioning unit ventilators. Actually, it costs only fifteen to twenty cents per square foot more than the cost of basic heating and ventilating equipment in average new construction—or between one and two percent of total building cost. Complete, immediate air conditioning is approximately fifty to fifty-five cents more.

By using Herman Nelson unit ventilators, schools have held heating and ventilating costs—including provision for future air-conditioning—to a total of less than $1.35 per square foot. Other schools have heating, ventilating and immediate air conditioning—for a total per square foot cost of less than $1.70! (And, in many cases traditional design concepts were used.) These are current costs, too! HerNel-Cool II unit ventilators have been available for little more than a year.

Look at the costs shown below. They are particularly interesting when you realize that they are truly representative—for Herman Nelson equipped schools in all parts of the country. Locations range from California to New York, from Wisconsin to Georgia.

TEN SCHOOLS ON WHICH BIDS WERE TAKEN ON HERMAN NELSON UNITS FOR HEATING AND VENTILATION ONLY

School	Total Cost	Total Cost Per Sq. Ft.	Heating & Ventilating Cost Per Sq. Ft.	Per Cent of Total Cost
A	$ 659,000	$15.33	$1.15	7.6
B	416,211	9.05	1.15	13.4
E	435,270	11.21	1.48	13.2
D	131,223	9.00	1.98	22.0
E	260,164	13.56	1.47	10.9
F	1,013,960	11.27	1.25	11.1
G	577,193	8.39	1.07	12.9
H	310,178	9.84	1.05	10.7
I	344,291	10.43	1.11	10.7
J	118,147	12.38	2.09	16.6
Average $	426,564	$11.05	$1.38	12.8

SEVEN SCHOOLS ON WHICH BIDS WERE TAKEN ON HERMAN NELSON UNITS FOR HEATING AND VENTILATION PLUS FUTURE AIR CONDITIONING

School	Total Cost	Total Cost Per Sq. Ft.	Heating & Ventilating Cost Per Sq. Ft.	Per Cent of Total Cost
K	$ 666,000	$15.49	$1.32	8.5
L	423,511	9.21	1.29	14.0
M	356,800	10.04	1.55	15.4
N	2,813,000	15.44	1.78	11.5
O	2,745,381	16.54	1.76	10.7
P	1,311,000	10.40	1.55	14.9
Q	500,000	15.63	1.72	11.0
Average $	1,259,385	$13.25	$1.57	12.3

Avg. add. cost provisions for future air conditioning..0.19

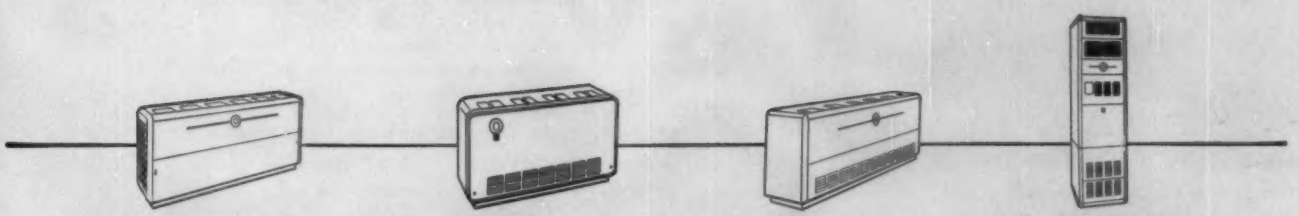
FIVE SCHOOLS ON WHICH BIDS WERE TAKEN ON HERMAN NELSON UNITS FOR HEATING AND VENTILATION PLUS COMPLETE AIR CONDITIONING

School	Total Cost	Total Cost Per Sq. Ft.	Heating Ventilating & Air Conditioning Cost Per Sq. Ft.	Per Cent of Total Cost
R	$ 690,000	$16.04	$1.88	11.7
S	371,100	10.44	1.95	18.7
T	406,463	14.38	2.41	16.8
U	360,700	13.11	2.22	16.9
V	1,094,387	11.55	1.68	13.8
Average $	584,530	$13.10	$2.01	15.6

Average added cost for complete air conditioning.....0.71

Complete cost studies—for schools employing immediate air conditioning as well as for those which are planning for its installation later—are available upon request.

Get all the facts now. Classroom air conditioning—immediate or eventual—is being included in more and more school planning. You'll want to consider it in yours. Write today to Herman Nelson Unit Ventilator Products, American Air Filter Company, Inc., 215 Central Avenue, Louisville 8, Kentucky. *In Canada: American Air Filter of Canada, Ltd., Montreal 9, Quebec.*

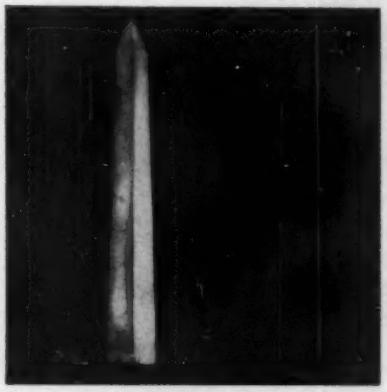


Hot water or steam unit ventilators

Amervent unit ventilators

Electric unit ventilators

UniVent gas-fired unit ventilators



Night-Time Illumination Sheds New Light on Washington Monument

Three years ago, the National Park Service incorporated in its "Mission 66" program for improving and preserving our national parks and shrines the long-delayed project of making the Washington Monument a landmark by night as well as by day. Kenneth W. Cobb, electrical consultant of the firm of Kluckhohn, Cobb and David, Washington, D. C., was commissioned to better previous attempts at lighting the slender marble shaft.

Cobb's solution was to install powerful floodlights at three points on each side of the monument, with each group focused to light only a portion of its total 555 ft height.



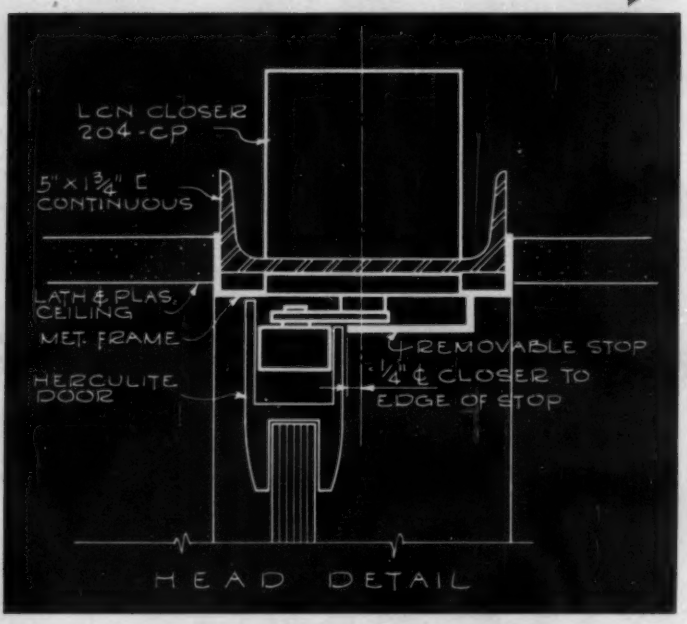
The pyramidion at the top is illuminated by eight 1000 watt searchlights, installed in pairs on four 15



ft concrete pedestals located 650 ft from the sides of the monument. The lower section of the shaft is lighted by floodlights mounted in concrete coves at its base. Each cove contains five 200 watt and four 500 watt units which provide a total of 164,000 candlepower of light on each side. To create an impression of even illumination from top to bottom, the candle-power was increased to 25,590,000 per side over the upper portion of the monument. Floodlights for the top three quarters of the shaft are housed in concrete vaults set 96 ft out from the base. The vault doors, which are kept closed during the day, swing back at night to expose the battery of lights inside.

Because the monument would look cylindrical if lighted evenly on all sides, the floodlights on the east and west sides were put on one dimmer control, and those on the north and south sides on another. The dimmers are set so that adjacent sides of the shaft always have different levels of illumination, thus accenting the corners. However, the bright sides are alternated so that each face of the monument receives maximum light during part of the night.

more roundup on page 264



CONSTRUCTION DETAILS

for LCN Overhead Concealed Door Closer Shown on Opposite Page

The LCN Series 200CP Closer's Main Points:

1. Efficient, full rack-and-pinion, two-speed control of the door
2. Mechanism entirely concealed; arm disappears into door stop on closing
3. Hydraulic back-check prevents door's being thrown open violently to damage walls, furniture, door, hinges, etc. Door may open 130°, jamb permitting
4. Hold-open (optional) set at any one of following points: 85°, 90°, 100° or 110°
5. Easy to regulate without removing any part
6. Used with either wood or metal doors and frames.

Complete Catalog on Request—No Obligation or See Sweet's 1958, Sec. 18e/La

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Canada: Lift Lock Hardware Industries, Ltd., Peterborough, Ontario



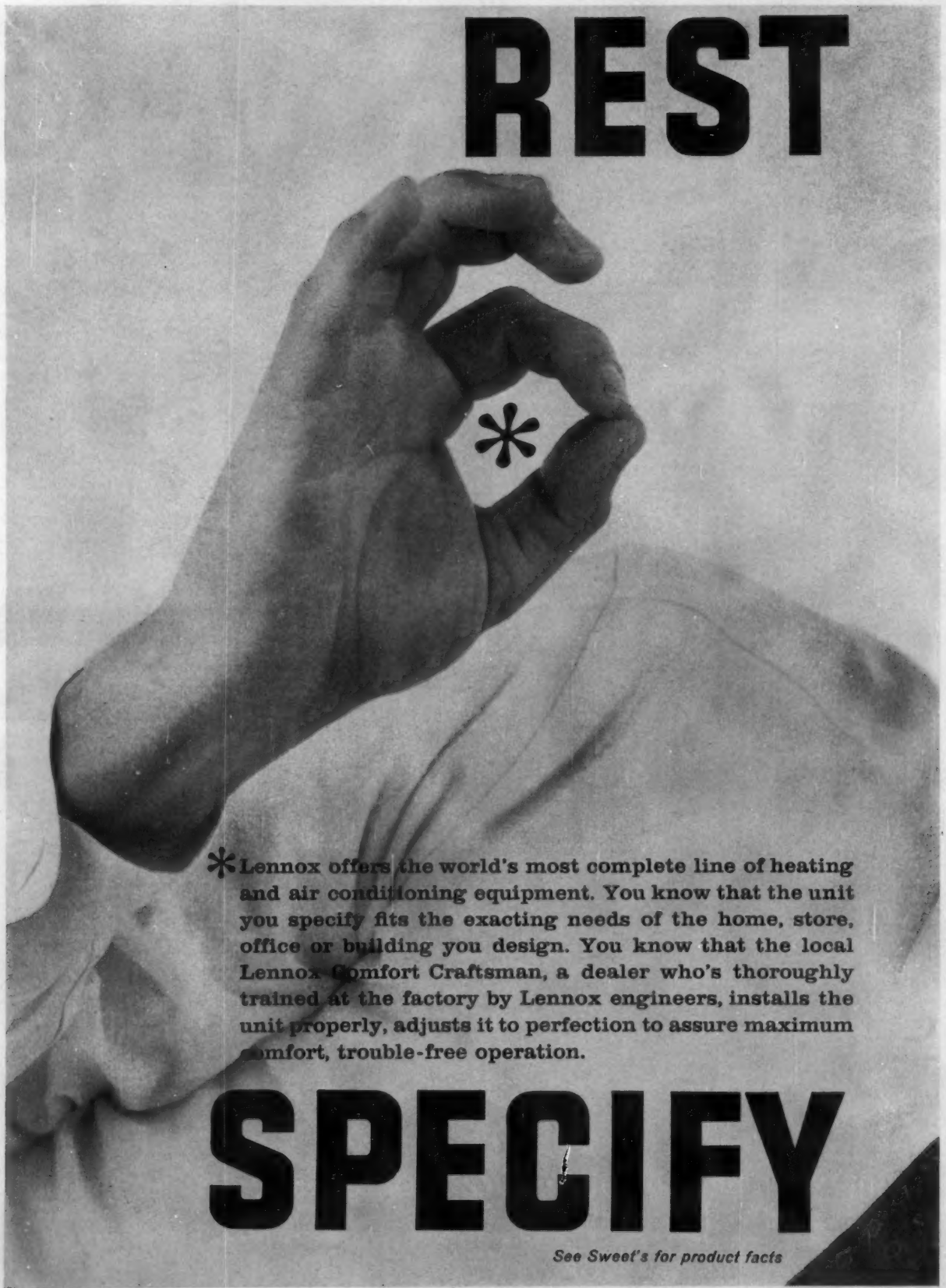
Naess and Murphy, *Architects - Engineers*
Maria Bergson Associates, *Designers*

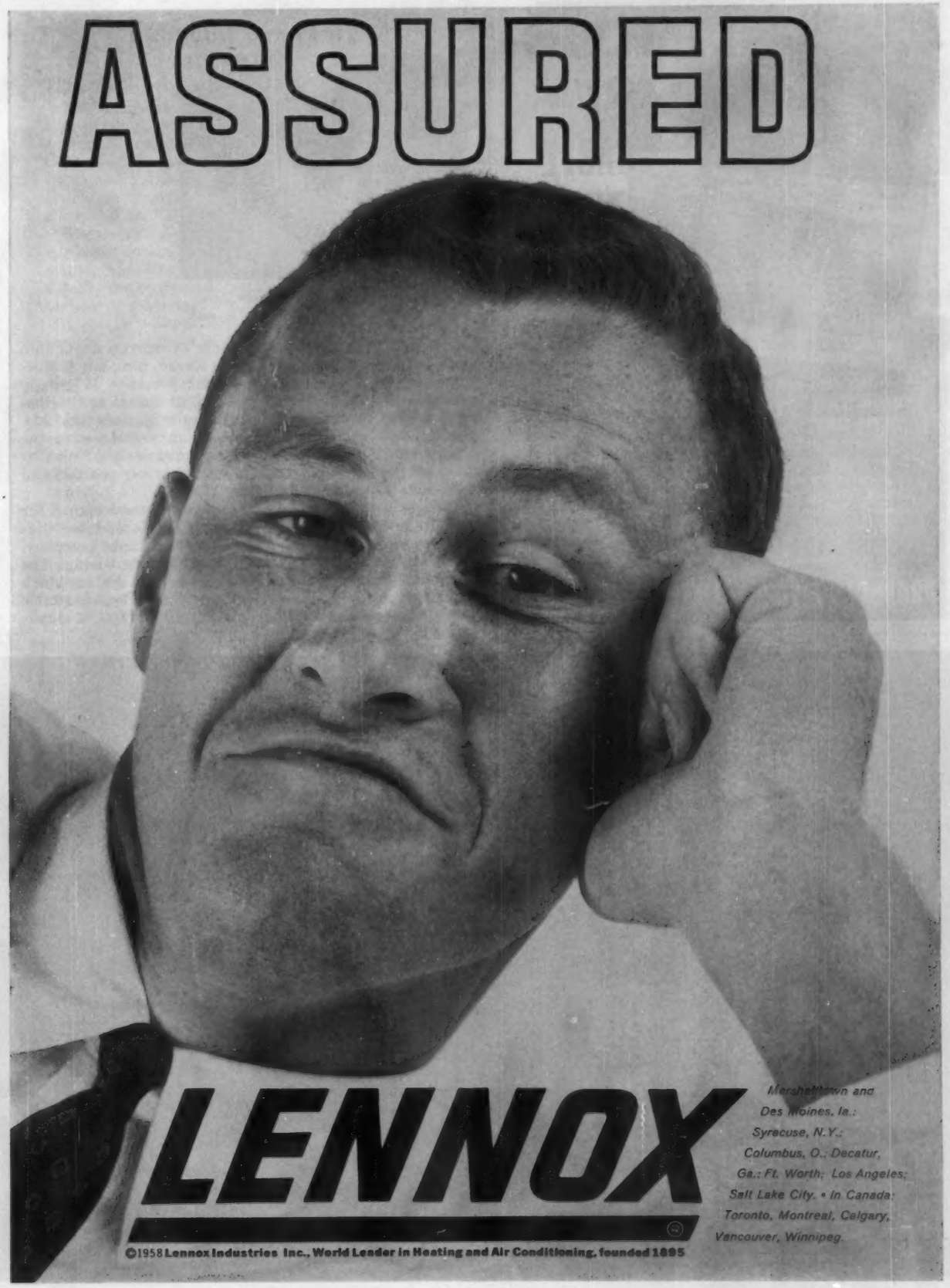
MODERN DOOR CONTROL BY *LCN* Closers Concealed in Head Frame

OFFICES OF LEO BURNETT COMPANY, INC., PRUDENTIAL PLAZA, CHICAGO

LCN CLOSERS, INC., PRINCETON, ILLINOIS

Construction Details on Opposite Page


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*Lennox offers the world's most complete line of heating and air conditioning equipment. You know that the unit you specify fits the exacting needs of the home, store, office or building you design. You know that the local Lennox Comfort Craftsman, a dealer who's thoroughly trained at the factory by Lennox engineers, installs the unit properly, adjusts it to perfection to assure maximum comfort, trouble-free operation.
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CABLE-STRUT . . . the Superior Basket type tray.

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A must for architects, consulting engineers, and designers interested in trays for the support of cables, wiring and tubing used for power and communication instrumentation, where speedier installation is desired. A full line of accessories is available.

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PRODUCTS DIVISION THE GLOBE CO.
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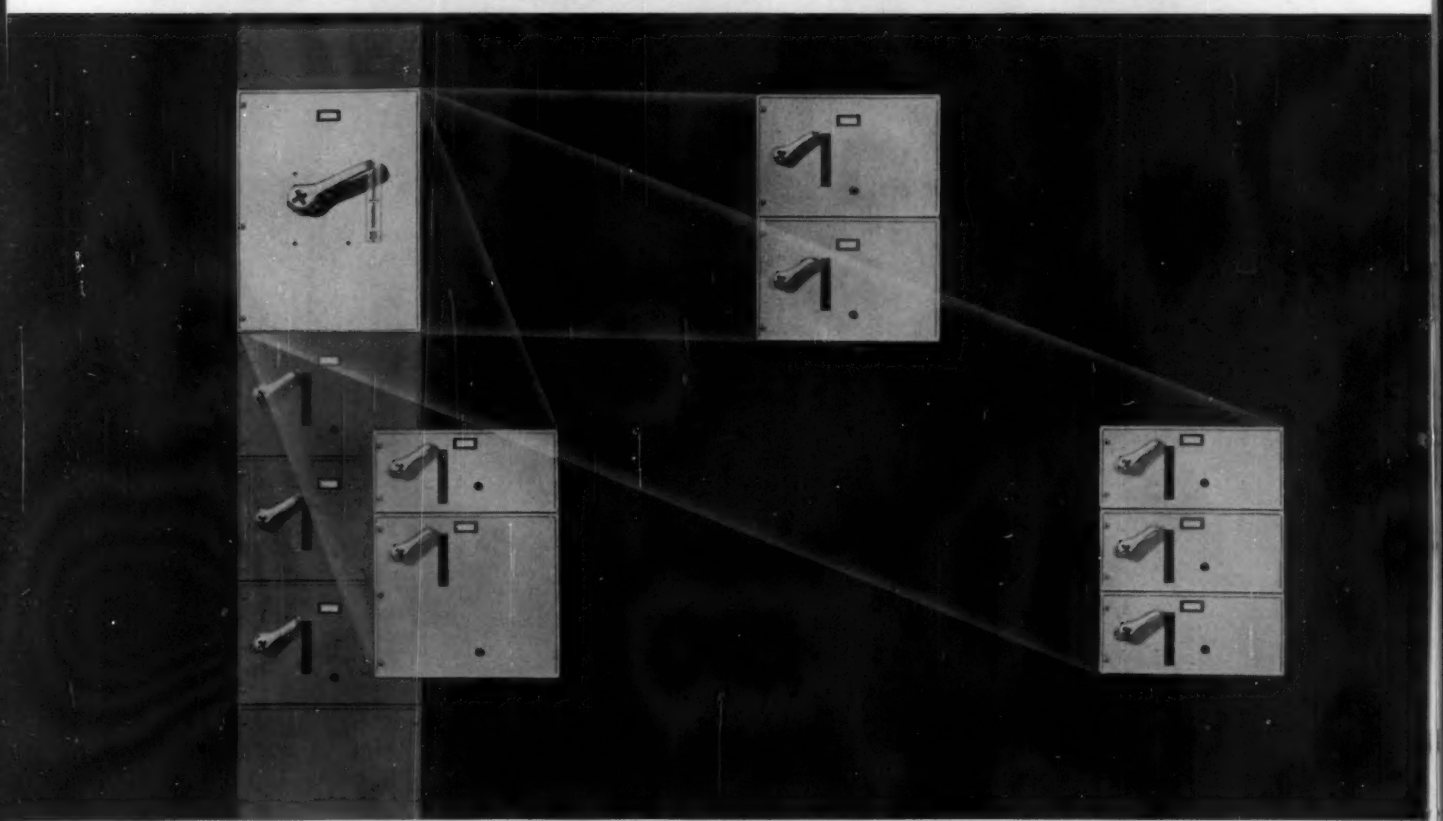
Technical Roundup



Underfloor Electric Distribution System Features Diagonal Layout

By shuffling scaled paper cutouts of wiring ducts into various floor patterns, architects Keene, Simpson & Murphy evolved a diagonal layout that promises to greatly increase the efficiency of the underfloor electrical distribution system for a new office building in Kansas City, Mo. Architect Arthur S. Keene says, in reference to the "paper work" which led to the diagonal design, "We discovered that the desks could be placed in any position and still have an outlet available."

The bottom five floors of the building are designed for parking; the upper seven will house offices and facilities of the American Telephone and Telegraph Company, whose operations demand adequate, flexible wiring. The large and small-size ducts of the underfloor system which supply it are laid side by side and joined by adjustable metal saddle supports. They cross every five feet at stand-



dard junction boxes installed at floor level for easy accessibility.

Three New Concrete Standards

The American Concrete Institute adopted, at its February meeting, these three recommendations as standards among others: 1) Recommended Practice for Design of Concrete Pavements (ACI 325-58), 2) Specifications for Concrete Pavements and Concrete Bases (ACI 617-58), 3) Minimum Standard Requirements for Precast Concrete Floor and Roof Units (ACI 711-58).

Standards (1) and (2) supplement each other, the one outlining design methods for airport and highway pavements, including soil foundations, slab sizes and joint details, the other specifying methods of construction and testing of materials and completed structures. Standard (3) details acceptable construction methods, design, and testing of single or multiple concrete element assemblies.

Bactericidal Air Conditioning

Studies backed by Surface Combustion Corporation conclude that all direct acting humidifiers such as water spray, absorbent material steam and the like tend to contribute to the bacteria content of the air. Made with hospital requirements in mind and using methods said to be superior to the usual petri dish routine, the studies also showed that humidity control systems using lithium chloride tend to reduce the bacteria content of the conditioned air. Intake air having 95 to 140 airborne microorganisms per ten cubic feet was purified to the extent of removing all but three to five microorganisms per ten cubic feet.

more roundup on page 268



How hospitals and plants save money with POWER-STRUT Movable Walls

Here's an idea that will save you money and enable you to make better use of floor space: *Power-Strut movable walls*. Built with standard structurals, they are low in cost. Moving them, if conditions change, is a simple two-man job. And all kinds of apparati can be easily attached to these sturdy walls.

Above are two views of the Power-Strut movable walls used in the children's blood test room of the St. Justine Hospital in Montreal. Despite the permanent look, they can be readily moved anytime. Power-Strut movable walls now have wide use in laboratories, schools, hospitals, and plants across America.

Manufactured by

A POWER-STRUT Sales Engineer will be happy to demonstrate with a visual sales kit, or write for brochure No. 588.

POWER-STRUT, INC.

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Westinghouse CONTROL CENTERS feature dual-modular units to solve your space problems

The efficient design of these new Westinghouse units is the answer to today's . . . and tomorrow's . . . need for complete flexibility in control center installations. Westinghouse control centers are ready to meet any demand for expansion or modification.

You get complete versatility with dual-modular units, plus unit space selection to meet your demands. Steel or aluminum Westinghouse control centers will house a complete range of devices to meet specialized control requirements.

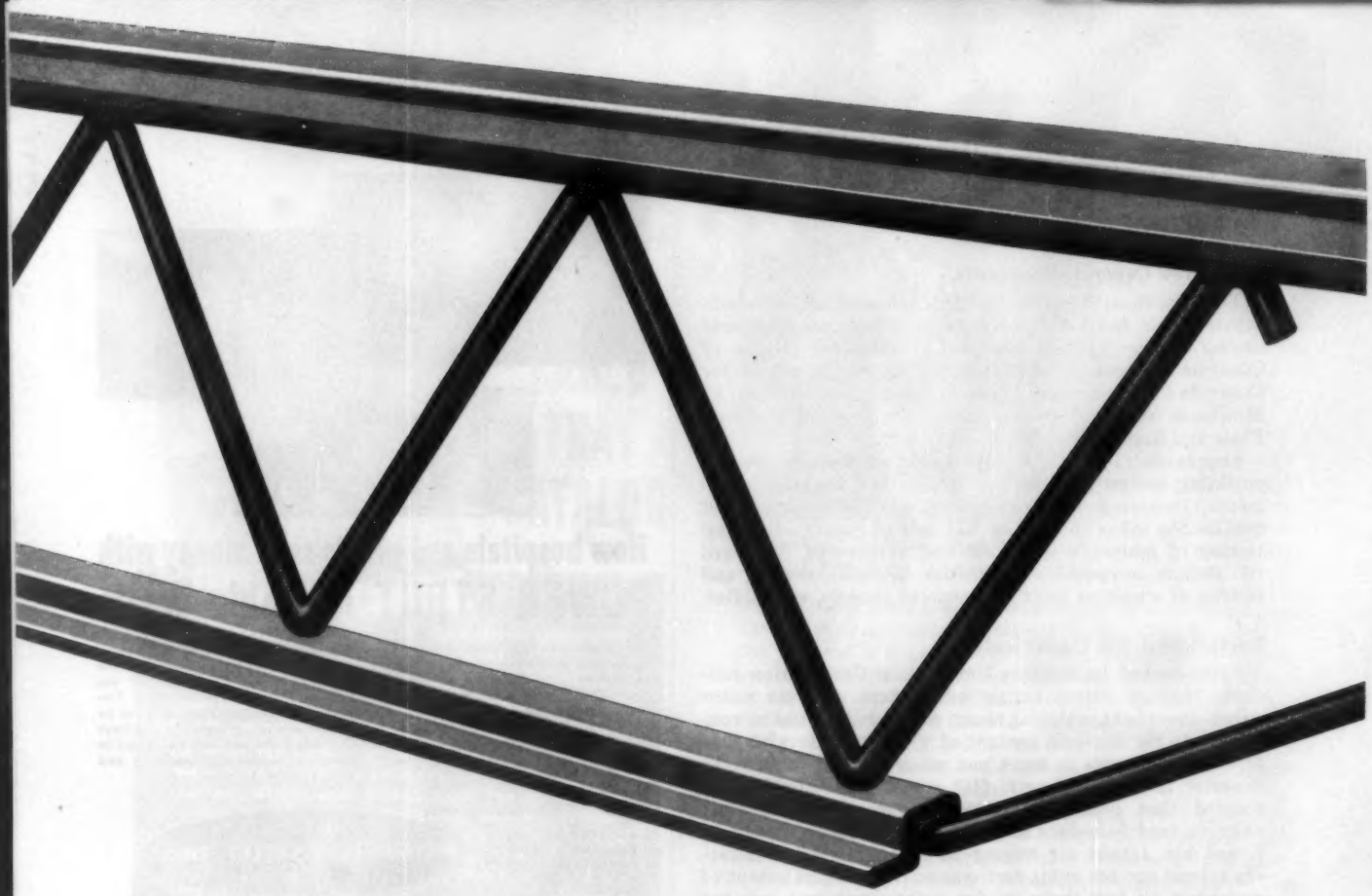


For complete information on the control center for your plant, call your local Westinghouse representative. Or, write Westinghouse Electric Corporation, 3 Gateway Center, Pittsburgh 30, Pennsylvania.

J-22107

POWER-UP starts with CONTROL

YOU CAN BE SURE...IF IT'S Westinghouse



NEW TRUSCON "O-T"
in a new design to fulfill

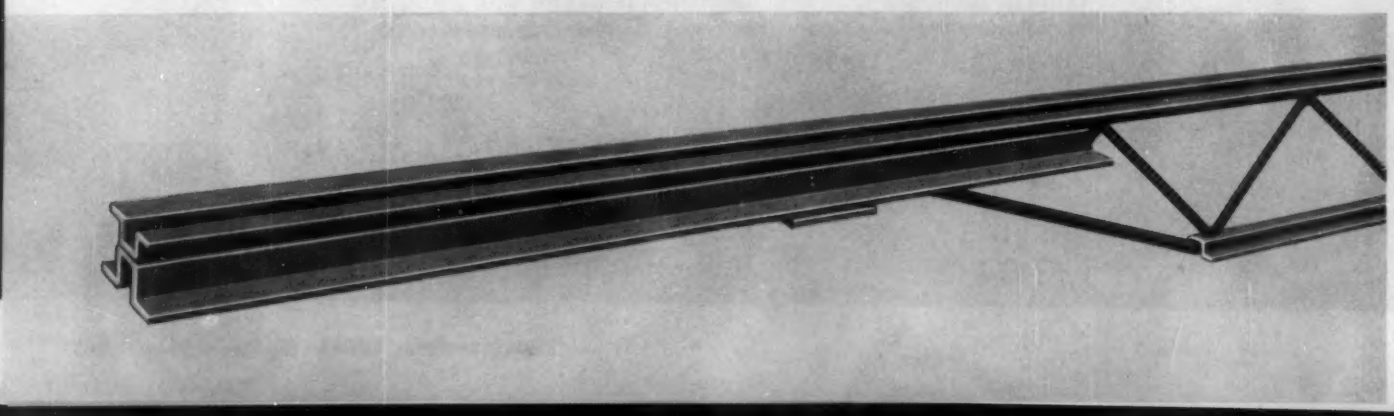
You asked for it... and here it is! Truscon's newly-designed, more versatile, stronger "O-T"®, Series "S" (Shortspan) Steel Joist... now being manufactured in the industry's newest fabricating plant, designed for highest efficiency.

You wanted a joist with a straight bottom chord to carry to spandrels and columns. Truscon designed it. You wanted a joist with an economical extended end. Truscon made it. You wanted a joist with good stability in both directions. Truscon engineered it.

And, you wanted more. You wanted a Series "S" Joist in the longer 40- to 48-foot range. Truscon produced it.

You wanted more exact, predictable coverage of all load conditions. Truscon, in co-operation with the Steel Joist Institute,

NEW TRUSCON "O-T" STEEL JOIST is a Warren Truss fabricated of accurately cold-formed top and bottom chords and a plain round web member. Cold formed steel sections not only make an exceptionally strong joist, but also add a pleasing appearance. Note the attractive extended end now possible with this new Truscon development.





STEEL JOIST
your design ideas

has increased the number of "S" Series sizes from 17 to 25.

You wanted the efficiency and economy of a balanced design—a joist design to balance with all other structural elements. Again, in co-operation with the SJI, Truscon will market this new "O-T" Joist designed to 20,000 psi. working stress as of January, 1959.

In producing and marketing this new design, Truscon continues to exceed the rigid standards of the Steel Joist Institute Quality Verification Program—your assurance of predictable, dependable load-bearing. The new design is available now. Ready to be incorporated into your next set of plans. Send coupon for specifications, design data, do's and don'ts.

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THE OUTSTANDING LOUVER FOR ANY LIGHTING DESIGN.

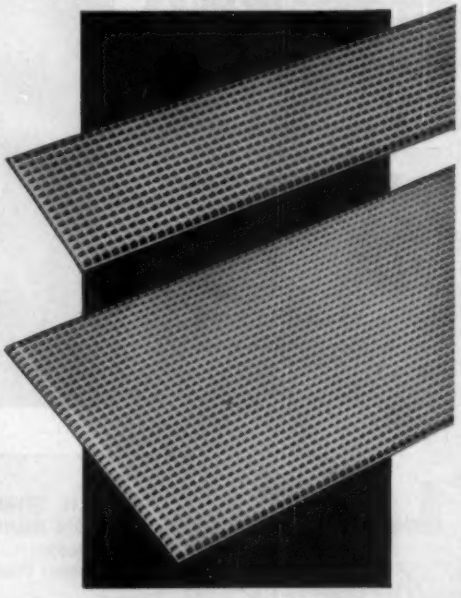
American Plastic Louvers offer the maximum in conformability for any lighting plan, whether it be industrial, institutional, commercial or retail. In application they may be employed in individual fixtures, full ceiling installations or any modular pattern. Strong, light weight louvers eliminate the need for costly heavy ceiling construction.

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Only the exclusive process of the American Louver Company is covered by these patents:
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Technical Roundup

Retractable Stainless Steel Dome To Roof Pittsburgh Civic Arena

The $20 million Pittsburgh Civic Arena, a key structure in the city's ambitious civic redevelopment program, is to have a glittering retractable stainless steel dome, said to be the largest in the world. According to the Pittsburgh Auditorium Authority, the mammoth movable roof will provide the city with an open air stadium that can be converted to a weatherproof auditorium at the press of a button.

The roof, which is 415 ft in diameter, will be composed of eight sections—six movable and two stationary. When it is retracted, the three movable leaves on each side will roll over the fixed sections to open the huge arena to the skies.

The skin of the dome, chosen for its weatherability, will be 20 and 22 gage type 302 stainless steel in a special dull finish. Total cost of the sheathing and mechanical seals is expected to run approximately $890,000.

The Arena, including its mall and parking areas, will occupy some 20 acres. An adaptable seating arrangement will accommodate from 7500 to 14,000 people, depending on the event.

Architects for the project are Mitchell and Ritchey of Pittsburgh, with Amman & Whitney of New York City as engineering consultants.



Stainless steel dome, 415 ft in diameter, has eight movable sections, two fixed

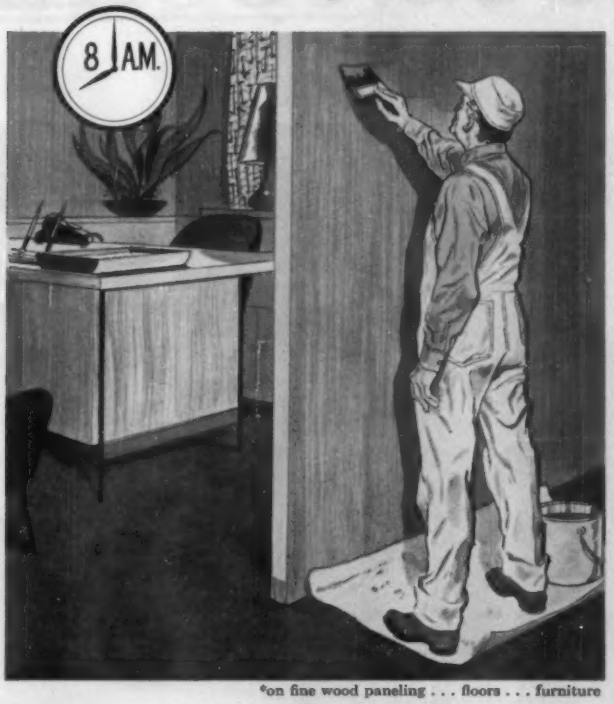


Closed auditorium becomes open air arena when movable leaves on each side retract

more roundup on page 272

New **FAST** way to finish any bare wood surface

DEVOE
Wonder Woodseal



*on fine wood paneling . . . floors . . . furniture

finished in just 3 hours



SEALS in one operation

Here's all you do:

1. Apply on smooth wood surface.
2. Two or three hours later sand lightly and dust clean.
3. Apply final coat of satin or gloss finish.

FINISHED THE SAME DAY!

For the final finish (allow 3 hours dry.), apply Wonder Woodstain—either Satin or Gloss—you'll have transformed a bare wood surface into a beautiful finish *in a few hours.*

Wonder Woodseal does everything shellac can do*... faster, better, at lower cost.

Extra advantages of Devoe Wonder Woodseal and Wonder Woodstain

- Either interior or exterior use. • 12 modern wood tones.
- Widest range of color effects . . . colors can be intermixed!
- A high degree of color permanency.
- Minimizes warping, checking, raising of grain.
- Covers 400 sq. ft. per gal. • Tone depth can be regulated.

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Box 1863, Louisville, Kentucky

Gentlemen: Send me complete information on Devoe Wonder Woodseal and Wonder Woodstain.

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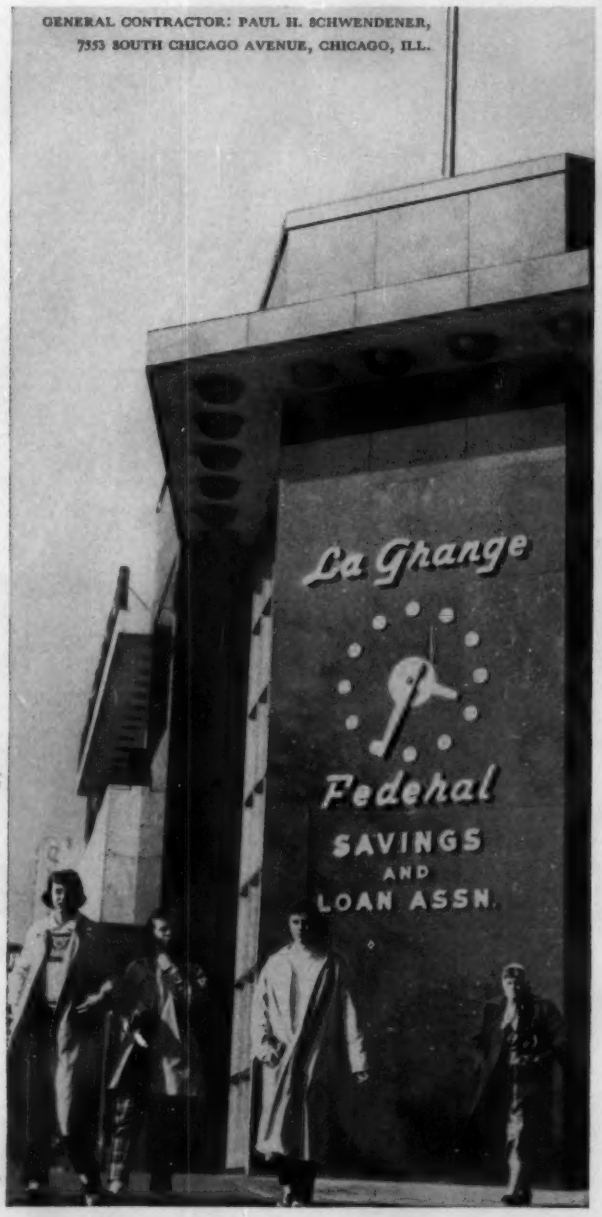
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Address_____

City_____

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...now we're cooling



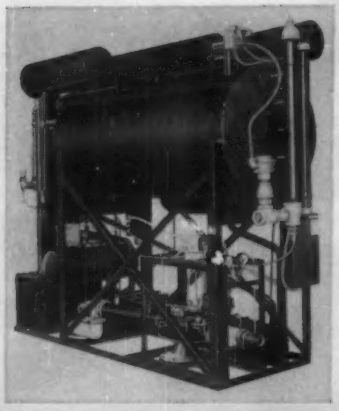


Specify Arkla-Servel Gas Air

With their new Arkla-Servel Gas Absorptive Cooler, the La Grange Federal Savings and Loan Association keeps customers cool in summer with the same compact system that keeps them warm in winter.

Before installing Gas, a complete study was made of available air conditioning systems. The Arkla-Servel unit—the only 25-ton absorptive cooler—was chosen because it is compact, easy to install, and costs are low for installation, operation and maintenance. No specially trained operating or maintenance personnel are required.

with GAS





Conditioning and you specify years of trouble-free comfort

Only Gas gives these important advantages:

- high efficiency at all times—even during the light loads
- temperature control is constant
- modular adjustment of capacity (instant automatic adjustment to match actual cooling requirements)
- dependability of fuel service at all times

Gas absorptive cooling can put your commercial and industrial clients' heating plant on a year around paying basis. It utilizes low pressure steam to cool water, has no moving parts to wear out, and provides quiet, economical operation. What's more, it's vibration-free.

Take advantage of the consulting services provided by your Gas company. They have trained specialists who have been working with architects and engineers for years. They belong to your associations or affiliations and are familiar with your problems. Check the facts about Gas and you'll see modern Gas air conditioning out-performs all other fuels. *American Gas Association.*



Second impressions of a *Quality* school

When this beautiful new Hopkins High School opens its doors this fall, few of the teachers or students will notice many of the construction details of the building. Their first impressions will probably be general ones relating to the overall structural design and arrangement of the school. Second impressions will come later when they've "lived" in the school for awhile. These second impressions will be based not on outward appearances but on the things that contribute most to their comfort, convenience and security.

There are hundreds of "built-in" structural components that contribute to this sense of well being at Hopkins, and Hubbell is proud that its wiring devices are included. Hubbell specification grade switches, receptacles and plates are installed exclusively throughout the Hopkins School. Like all other quality materials used, they were specified because of their safety, convenience and long-term dependability.

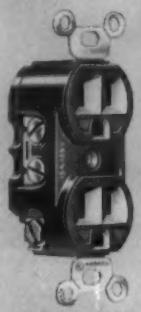
Yes, second impressions at Hopkins are sure to be good impressions and they will be lasting ones, too, because quality in anything is always a lasting ingredient.

Architect: Bissell and Belair
Consulting Engineers: Orr-Schelen Co.
Electrical Contractor: Harris Bros.
Hubbell Supplier: Graybar Electric Co.

(All firms are in Minneapolis.)



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Technical Roundup



Murals of Acrylic Plastic Introduce New Art Technique

Flanking the main entrance of the new Brooklyn Polytechnic Institute building in Brooklyn are two large murals executed by a new technique based on the passage of light through multiple colors and layers of acrylic plastic.

The work of muralist Abraham Joel Tobias, the panels were constructed from a 3 by 10 ft base sheet of ¼ in. transparent acrylic, overlaid with transparent colored pieces precisely cut to the curves and angles of the design, and edge-cemented together to form the intricate pattern. To achieve a three dimensional appearance and subtle variation in color from both the interior and exterior, duplicate designs were built up of multiple layers—as many as six layers in some sections—on each side of the base sheet.

The completed panels were framed in aluminum and covered on both sides by protective shields of transparent acrylic plastic.



Design, executed in colored plastic, is built up on both sides of 3 by 10 ft base



Precisely-cut plastic shapes are edge-cemented together to form intricate pattern

more roundup on page 278

STANLEY *is a name I know*



CHARLES THOMAS, A.H.C., The N. T. Bushnell Co., New Haven, Conn.

"Stanley swing-clear hinges give me 2" more per opening."

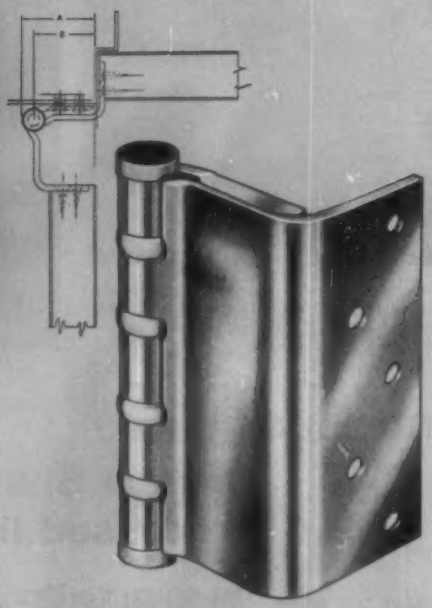
"And, believe me, hospital corridor doors to patients' rooms can use the extra space! Beds and stretchers used to mar them up in no time at all unless I prescribed expensive angle and stretcher plates. Thanks to Stanley swing-clear hinges, that's no longer true – now there's room to spare.

"Swing-clear hinges are half-mortise or full-surface design, and they don't require special jamb construction. Part of Stanley's patented, full-jeweled, ball bearing line, they'll last for the life of any hospital where they're applied."

For details, write Stanley Hardware, 169 Lake Street, New Britain, Connecticut.



Hospitals across the country today benefit from the extra inches provided by Stanley swing-clear hinges recommended by Mr. Thomas and other leading hardware consultants.

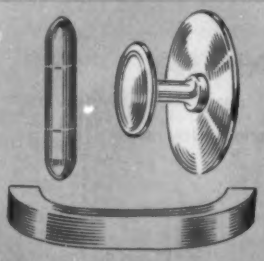


Stanley swing-clear hinges take door completely out of the opening – provide 2" more clearance at every opening.

STANLEY IS THE NAME TO LOOK FOR ON QUALITY PRODUCTS LIKE THESE



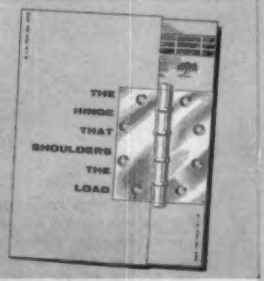
Hospital Hardware Brochure, A.I.A. File No. 27B. A concise folder of special hinges and other hardware for hospitals.



Solid aluminum cabinet hardware (also available in brass) is one of the eight smart and practical styles made by Stanley.



Stanley MAGIC-DOOR Controls offer an automatic welcome to visitors entering hospitals and other public buildings.



A graphic illustration of why Stanley's full-jeweled, ball bearing hinges last as long as the buildings where they're used.

AMERICA BUILDS BETTER AND LIVES BETTER WITH STANLEY

STANLEY

This famous trademark distinguishes over 20,000 quality products of The Stanley Works—hand and electric tools • builders and industrial hardware • drapery hardware • door controls • aluminum windows • stampings • springs • coatings • strip steel • steel strapping—made in 24 plants in the United States, Canada, England and Germany.



Striking, pleasant accent for an up-to-date building corridor: Sylvania recessed lighting troffers continuous-row mounted with acoustical ceiling materials.



Individually mounted troffers, imaginatively arranged, combine attractive design with good basic light distribution for company cafeterias and lounges.



Ribbons of light—Sylvania recessed troffer lighting can be mounted in continuous rows and spaced for high lighting levels in modern business offices.

Introducing . . .

a new Shallow Troffer Series by Sylvania—recessed lighting for today's building methods

For the aesthetically minded lighting designer or installer, who has to cope with the modern trend to lower ceilings and shallower plenum spaces . . . here is a new approach to recessed lighting. It's Sylvania's new Shallow Troffer Series, fixtures which measure only 5½" from top to bottom—and, in many cases, require no additional depth for mounting.

Available in a variety of models, in both one- and two-foot widths, the Sylvania Shallow Troffer makes this popular form of lighting *practical and usable* in all new buildings, with full illumination efficiency. The units are fully recessed. Unsightly latches are hidden. Even the hinges don't show . . . only the clean straight lines of the frame and attractively styled shielding.

Sylvania Shallow Troffers are carefully engineered to utilize the full plenum space. Lay-in type troffers are provided for Z-spline and inverted-T ceilings. Exclusive *snap-up hanger* provides quick, secure mounting for most other types of acoustical ceilings (see sketches below). Ask your Sylvania Fixture Specialist for full details, or write direct for FREE new folder of specification data.

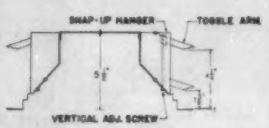
Sylvania Electric Products Inc.
Dept. J20, Lighting Division—Fixtures
One 48th Street, Wheeling, W. Va.

SYLVANIA

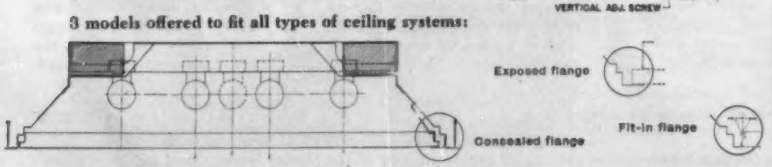
Fluorescent Lighting Fixtures and Systems

Best fixture value in every price range

New 5½" high troffer utilizes full plenum space. Exclusive *snap-up hanger*, with vertical adjusting screw, provides secure side-mounting for acoustical ceilings with support elements parallel to troffer. End-mounting brackets also available.



3 models offered to fit all types of ceiling systems:



All standard troffer shieldings:



LIGHTING • TELEVISION • RADIO • ELECTRONICS • PHOTOGRAPHY • ATOMIC ENERGY • CHEMISTRY-METALLURGY



NOW! ALL SIX MODELS offer greatest design flexibility for single and dual duct systems

All six high performance, space-saving, cost-saving models are available with Constant Volume Control . . . with either flat plate or sinuous baffle . . . with static pressure taps for quick accurate air delivery measurement . . . and with the patented helical spring damper that assures complete close-off.

Wherever your plans call for a high velocity air conditioning system—whether you're designing a new structure or remodeling an old one—choose Connor high velocity valve attenuators . . . there's a model that meets every design and performance test.

Request new 24 page Bulletin K33-A, which includes selection data on Connor equipment and special information for the design of *any* High Velocity system.

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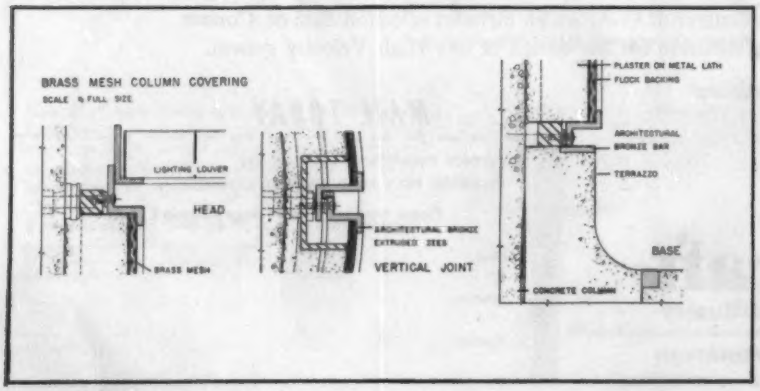
ADDRESS.....

CITY..... ZONE..... STATE.....



Above: Graceful spiral stairway helps to integrate the several floor levels. Handrails are made of formed Red Brass strip, reinforced with rectangular Red Brass rod, and the balusters are tubular Red Brass sleeves over a round steel rod. The column is enwrapped with woven bronze wires that have been partially colored to give a pleasing black and gold effect.

Below: Detail drawing showing how Architectural Bronze extrusions are used at vertical and horizontal joints and at base and head of column.



All of the metal in the check tables on the two banking floors is Red Brass. The built-in adding machine in the center of the top is a novel feature much appreciated by patrons.



NO OTHER METALS HAVE THE VERSATILITY AND ENDURING BEAUTY OF COPPER ALLOYS

The architect and designers skillfully used the warmth of copper alloys to establish an air of friendliness in the new United States National Bank in Denver. These beautiful metals also contribute dignity and the feeling of stability so important in banking institutions.

This excellent example of copper alloys in architectural design utilizes Architectural Bronze extrusions, Red Brass sheet and seamless tube, Red Brass formed strip, drawn rectangular Red Brass rod, bronze screening and bronze castings.

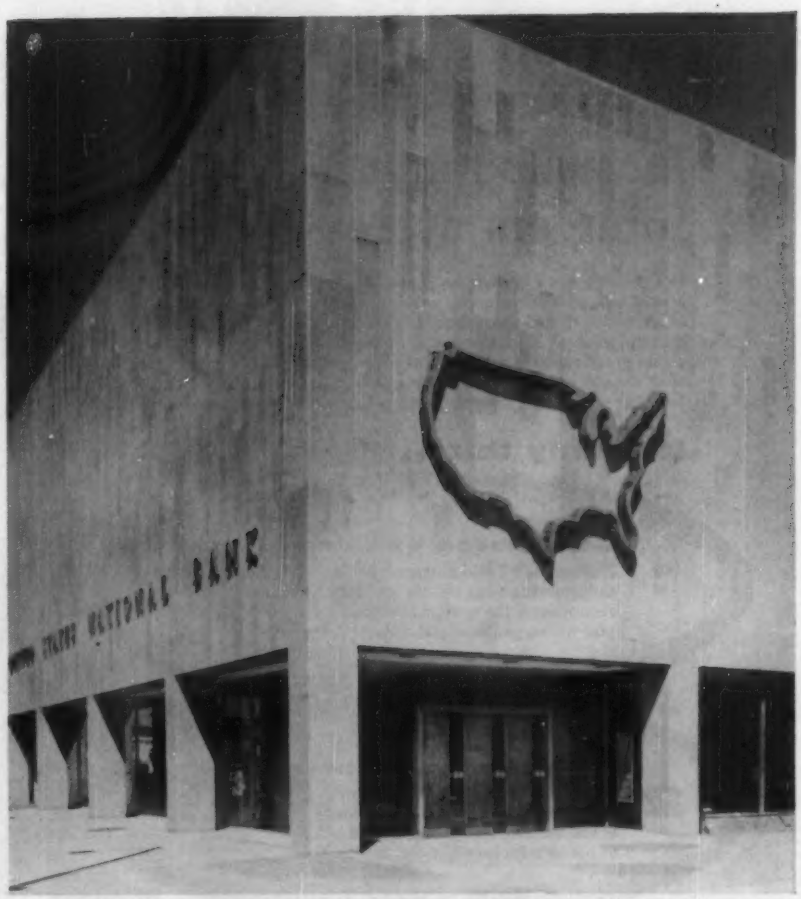
The American Brass Company's years of experience in manufacturing copper-alloy materials for architectural uses have enabled us to give valuable assistance to architects, designers and fabricators in creating designs in Copper, Brass, Bronze and Nickel Silver. If we can serve you in a similar manner, please write: Architectural Service, The American Brass Company, Waterbury 20, Conn. 8808

ANACONDA®
ARCHITECTURAL METALS
Made by
THE AMERICAN BRASS COMPANY

Architect: James S. Sudler. **Associated Interior Designers:** Maria Bergson Associates. **Sculptor, bronze doors and outline map:** Edgar Britton. **Bronze Mesh:** W. S. Tyler Company. **General Contractor:** N. G. Petry Construction Co. **Ornamental Bronze Fabricator:** Zimmerman Ornamental Bronze and Iron Works, Denver.

An example of attention given to details is this drinking fountain of special design. The bowl is of highly polished cast bronze, the bracket is formed from Red Brass sheet.





Main entrance of The United States National Bank on Broadway, Mile High Center, Denver, Colorado. The sculptured map, the doors and the lettering are of cast bronze.

Below: The main entrance doors consist of tempered plate glass in combination with quarter-inch-thick cast-bronze facings enriched with integral contemporary design.



Executone gives you **4-way service** for sound and intercom systems!

We provide not only wiring plans, shop drawings, specifications and costs, but with our nation-wide organization of exclusive distributors we also give your clients on-premise maintenance of equipment and instruct their personnel in its proper use. If you have a job on your boards that should utilize intercom or sound, you should be familiar with these four important Executone services;

Not only this...

1 Consultation Service

Executone's Field Engineers will assist you in determining your clients' communication needs... recommend the system designed for the job... provide you with a professional consultation service.

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Each local Executone distributor is prepared to take full responsibility for the final and satisfactory operation of the system, whether installed by the contractor, or his own factory-trained crew.

But also this!

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Each local distributor is staffed with skilled, factory-trained technicians. They also have complete stocks of standard replacement parts. Continuous, uninterrupted performance of every Executone system is assured.

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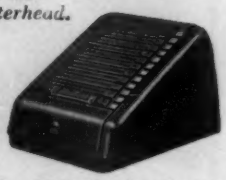
Local Executone representatives instruct your clients' personnel in the proper use of Executone Systems. This planned program assures maximum benefits through proper operation and utilization of their systems.

Architects and engineers are invited to send for Executone's 325 page Reference Manual "P-12" No charge or obligation. Please use your letterhead.

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Technical Roundup

First Major City OK's Plastic Pipe for Water Service Lines

In the first such move by any large urban municipality, the city of Cleveland has approved plastic pipe for street-to-house water service lines, and amended its building code accordingly. The pace-setting action was taken by the Board of Building Standards and Building Appeals after proceedings which brought before the group more than 20 technical reports and studies of actual water system installations. Evidence accepted by the city showed that, in addition to its corrosion resistance and low cost, plastic pipe has a pressure-holding capacity up to four times that required, and excellent strength and heat-resistance.



Metal Space Frames Add Decorative "Roof" to Shopping Center Mall

The three decorative space frames that hover over the mall at West Covina, California's new Eastland Shopping Center were put there by architects Albert C. Martin and Associates to meet three basic objectives: to create a sense of intimate scale in the area by defining height; to carry out the triangular theme of the center; and to provide interesting shadow patterns and patches of reflected color from scattered transparent colored panels. They do so simply, economically—and effectively.

The frames, which contain a total of over two miles of *Unistrut* metal channels, cover an overall area of 8,139 square feet. Each section spans the mall area and is anchored to the parapet walls above the canopy roof on both sides.

Because the use of a standardized system of bolted metal framing eliminated detailed layouts as well as drilling, welding and riveting, engineering and construction costs were low. But the decorative value of the airy steel framework with its random arrangement of colored panels is high.



Call the man from Fenestra for

Office doors at the lowest installed cost!

Business-like in appearance and durability, too! These new Fenestra® Hollow Metal Doors swing open smoothly, close quietly. There's "quiet", built into every Fenestra door. You save year after year on maintenance because Fenestra Doors can't warp, swell, stick or splinter. They last a lifetime! And in addition, you get the lowest installed cost because:

1. You buy a *complete package*—door, frame, hardware, completely machined at the factory to eliminate on-the-job cutting and fitting.

2. Erection is fast—one man with a screw driver can install a door in minutes.

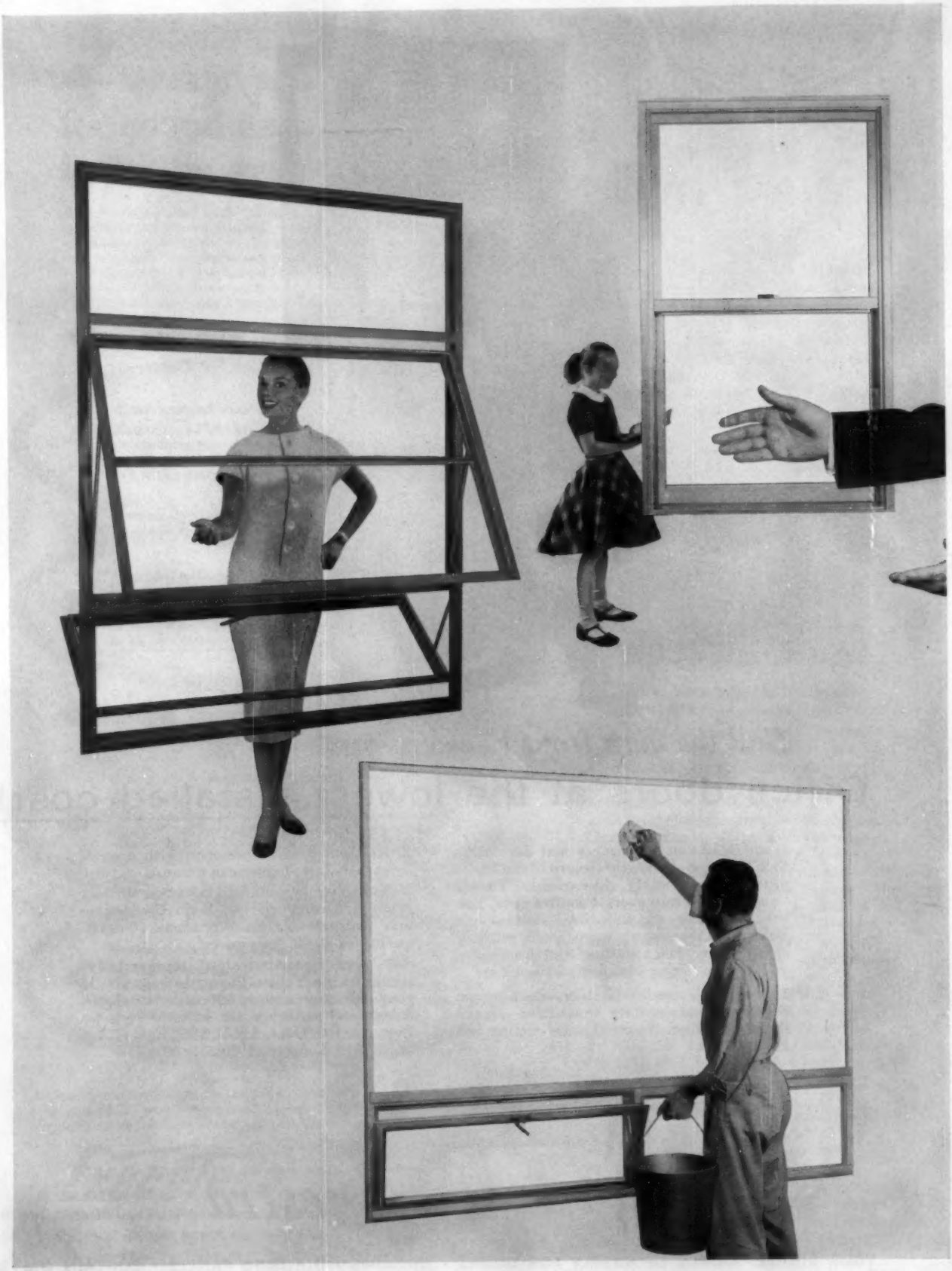
3. You have a complete selection of door types (1⅜" and 1¾") of distinctive designs and features—*all mass produced.* Custom quality at stock door prices!

Ask your Fenestra-trained representative (listed in the Yellow Pages) to help you in your selection and specification of doors, frames and hardware. Or, write to Fenestra Incorporated, Dept. AR-9, 2252 East Grand Boulevard, Detroit 11, Michigan.

Let the man  *from Fenestra be your "door man"*

Fenestra HOLLOW METAL DOOR FRAME • HARDWARE UNITS

YOUR SINGLE SOURCE OF SUPPLY FOR DOORS • WINDOWS • BUILDING PANELS • CURTAIN WALLS





Call the Man from Fenestra for

a NEW complete line of MAINTENANCE-FREE ALUMINUM or STEEL WINDOWS

He can give *impartial* answers to your questions about window costs, styles, maintenance and performance—whether you're interested in steel or aluminum. He has no axe to grind for either. Or for one style versus another. Because he has a *complete* line of *both* steel and aluminum windows—the finest for every purpose.

He can show you slim-framed aluminum projected windows for school and office buildings. Sturdy steel pivoted windows for industrial buildings. Double-hung. Casements. Intermediate and commercial. In short, just about every style window you could possibly need . . . in steel *or* aluminum.

These windows require virtually *no maintenance!* The steel windows can have a lifetime, corrosion-resistant *Fenlite* finish that requires no painting. The aluminum windows have a satiny finish that is permanent.

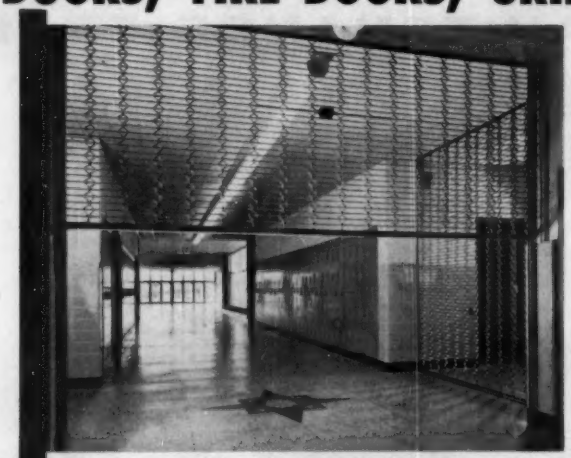
If you need advice or information on any window or maintenance problem, call the Man from *Fenestra*—an *experienced* window specialist. He is listed in the Yellow Pages. Or write to Fenestra Incorporated, Dept. AR-9, 2252 East Grand Blvd., Detroit 11, Michigan.

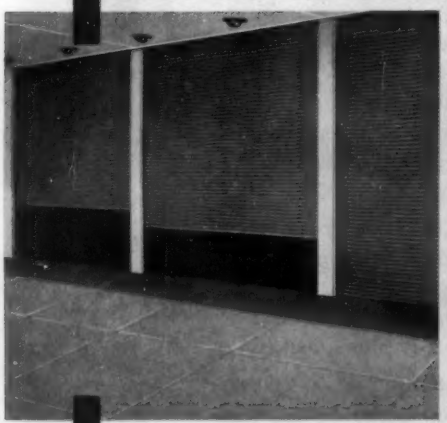
Fenestra
INCORPORATED

YOUR SINGLE SOURCE OF SUPPLY FOR CURTAIN WALLS • DOORS • WINDOWS • BUILDING PANELS

Best Answers for Hospital Doors, Passageways, Other Openings:

KINNEAR ROLLING DOORS,* FIRE DOORS, GRILLES







Coiling upward action is Kinnear's key to highest efficiency. It assures maximum space economy: *all floor and wall space around the opening is fully usable at all times.* Headroom and ceiling-space requirements are negligible (the barrel on which the closure coils when opened can in most cases be set within the wall either *below* ceiling height, *at* ceiling height, or *above* ceiling height). Motor, chain, crank or manual-lift is available, to suit any operating needs. In all cases, the closure rises completely out of the way when opened.

KINNEAR ROLLING DOORS protect openings with a continuous curtain of interlocking steel slats *(a Kinnear first)* — full door efficiency plus protection against wind, weather, intrusion, and fire.

KINNEAR ROLLING FIRE DOORS have features added to the steel-slat curtain operation that bring positive, automatic, safely controlled closure in case of fire, plus extra fire-blocking capacity approved by Underwriter's Laboratories, Inc.

KINNEAR ROLLING GRILLES, a combination of rugged steel bars and links fully protect openings against trespass, without blocking light, air, or vision.

All three of these Kinnear upward-acting closures can be used in various combinations, and are built to fit openings of almost any size. *Write today for full details.*

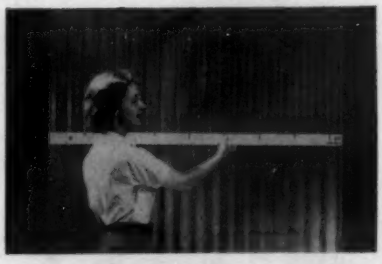
***Also doors of modified design, available as COUNTER SHUTTERS**

KINNEAR ROLLING DOORS
Saving Ways in Doorways

The KINNEAR Mfg. Co.
FACTORIES:
1860-80 Fields Avenue, Columbus 16, Ohio
1742 Yosemite Ave., San Francisco 24, Calif.
Offices and Agents in All Principal Cities

Product Reports

continued from page 247



Wider Fiberglass Panels

Wide fiberglass panels (50 in. for walls, 51½ in. for roofs) are claimed to reduce installation costs, because of the need for fewer overlaps and fasteners. The 2½ in. corrugated panels are the widest on the market, according to the manufacturer, and cost approximately ten cents per square foot less to install than the usual 27½ in. panel. *Structoglas Division, International Molded Plastics, Inc., Cleveland, Ohio.*



Resin-Overlaid Bevel Siding

A phenolic resin-coated siding provides, according to the manufacturer, an excellent vapor barrier, eliminates paint blistering, peeling and checking, and requires one third less paint than standard sidings. The resin-fiber surface is backed with two-ply laminated lumber, providing the advantages of both lumber and plywood. Available in 12- and 16-in. widths, 8 ft long, the *GPX* Yellow Bevel Siding can be installed quickly because of precision end-trimming and a self-aligning lap on the bottom edge. *Georgia Pacific Corporation, Dept. 13A, Equitable Building, Portland, Oregon.*

New Thermopane Sizes

Addition of 60 new sizes has brought up to 65 the number of standard sizes of *GlasSeal Thermopane.* The sizes now range from 16 by 24 in. to 45½ by 25½ in. Special sizes made up. *Libbey-Owens-Ford, 608 Madison Avenue, Toledo 3, Ohio.*

more products on page 288

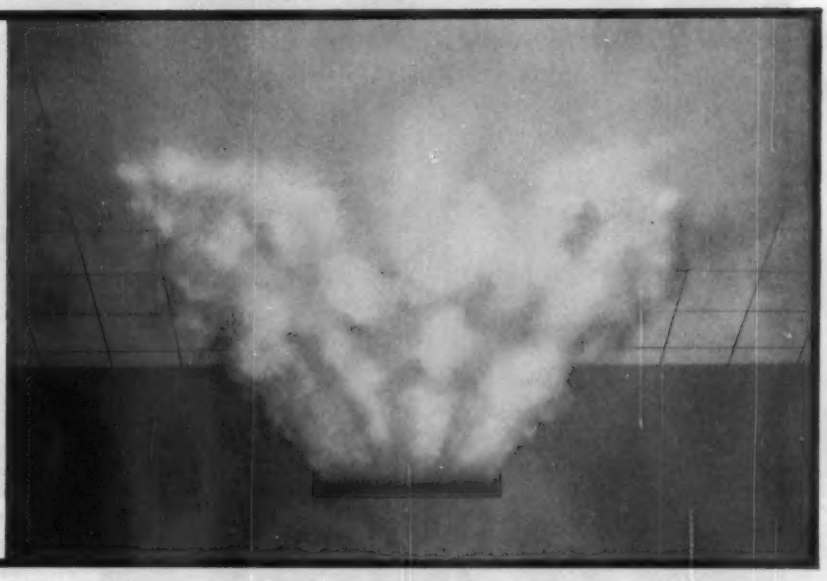
THE MARK OF QUALITY

BARBER COLMAN

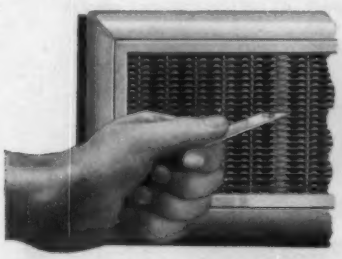
Uni-Flo

ENGINEERED AIR DISTRIBUTION

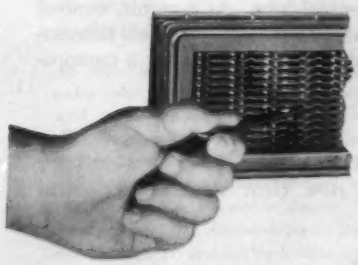
...there's more to air distribution than meets your eye



Smoke tests let you see air distribution patterns. Every Uni-Flo grille or diffuser design is performance-tested in the Uni-Flo laboratory. You are cordially invited to visit this laboratory to see for yourself why Uni-Flo Engineered Air Distribution means unmatched comfort.



Model MA Diffuser — has one-inch flange. *Core removable from front* — frame can be painted with the wall.



Model FA Diffuser — has beaded edge frame. *Core removable from front.*

Uni-Flo sidewall diffusers are engineered to create the environment you envision in the buildings you design

Designed into Uni-Flo sidewall diffusers is far more than their attractive appearance — because it takes far more than this to provide the environment you envision. Uni-Flo sidewall diffusers are *engineered* to make air behave, to eliminate the complaints: "too hot—too cold—too drafty."

It isn't necessary to use ceiling diffusers to guarantee comfort. Uni-Flo sidewall diffusers mix the room air with the conditioned air in a uniform manner that assures complete comfort in the occupancy zone.

For air conditioning that does not call attention to itself with uncomfortable drafts, plan to employ Uni-Flo air distribution products.

Catalog available upon request to your nearby Barber-Colman field office or direct from the factory.

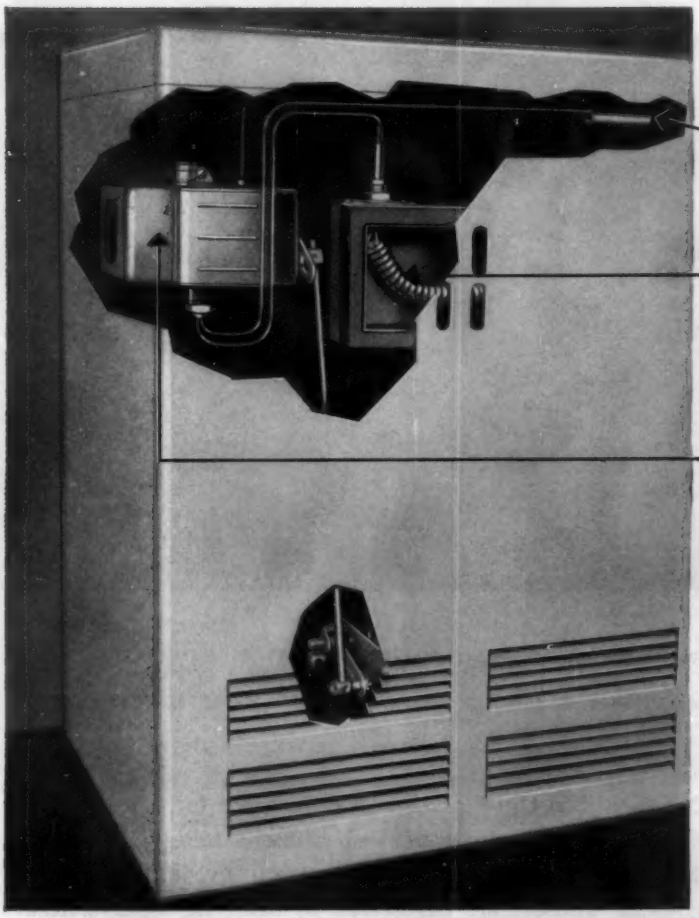
BARBER-COLMAN COMPANY

Dept. I, 1104 Rock Street, Rockford, Illinois

THE MARK OF QUALITY

BARBER COLMAN

New unit ventilator control provides greater accuracy, costs less to install!



Temperature sensing bulb in the discharge air stream.

Temperature sensing bulb in the room air sampling chamber.

(Aspirating principle insures exceptionally accurate and responsive control.)

Motor operator, controlled by the integral thermostat, is directly linked to the damper mechanism. This system provides automatically controlled heating and ventilating.

Positive spring return closes the outdoor damper in event of fan shutdown or power interruption.

Dual Element Controller mounts directly on face and bypass units to control heating and ventilating

This new all-electric Barber-Colman control combines the function of thermostat and controller in a single "package." It mounts directly on the unit ventilator, eliminating the need for a wall thermostat and substantially reducing control and installation costs. Factory installation is practical.

As illustrated, the control employs the sampling chamber system available on all face and bypass units. This is the proved aspirating principle used on the most difficult and exacting laboratory and industrial control jobs. As a result, control accuracy is superior to that of most wall thermostats (location of which is ordinarily a compromise).

For complete information on this outstanding cost-reducing improvement in unit ventilator control, ask for new Unit Ventilator Control Application file.

BARBER-COLMAN COMPANY

Dept. I, 1304 Rock Street, Rockford, Illinois

One source . . . one responsibility for *both* air distribution and automatic controls



Luxury MOTEL solves noise problem by changing to

B&G UNIVERSAL PUMPS



The seven-acre, landscaped patio of HiwayHouse includes a swimming pool, children's playground, golf putting area and a miniature railroad. Year 'round air conditioning is provided by a central circulated water system.

MECHANICAL CONTRACTOR:
Arizona York Refrigeration Co., Phoenix, Arizona



HiwayHouse, fabulous 250-room motor hotel at Phoenix, Arizona, was planned and built by Del E. Webb Construction Co. with the comfort and convenience of guests as the only consideration. Among its features is a circulated water heating and cooling system, which required corrective measures because of noise.

The mechanical contractor describes the cause and the remedy as follows:

"A conventional type of pump was originally used in the air conditioning system. When the system was turned on, a motor hum and water noise was transmitted through the units in the motel rooms. The room units with their copper coils and radiator fins acted as sounding boards, particularly at night when fans were off.

"To correct this problem we replaced the conventional pumps with Bell & Gossett Universal Pumps properly sized for the job. This completely eliminated transmission of noise and there is now 100% quiet operation in all rooms of the motel.

"In general, it has been our experience that B&G Universal Pumps for this type of operation are far superior to any other type of pump and we recommend them highly."

HIGHLIGHTS OF B&G UNIVERSAL PUMP DESIGN

● Non-overloading motor—constructed, selected and stamped for *extra quiet* operation ● Sleeve bearings, oil lubricated, in both pump and motor ● Motors ring-type mounted, suspended in rubber ● Spring-type quiet coupler ● Oversized special alloy steel shaft with integral collar which absorbs thrust ● Removable bearing frame—no need to break pipe connections or remove motor ● "Remite" Mechanical Seal, diamond hard, prevents water leakage ● Hydraulically balanced impeller

B&G

Reg. U.S. Pat. Off.

BELL & GOSSETT
COMPANY

Dept. FK-32, Morton Grove, Illinois

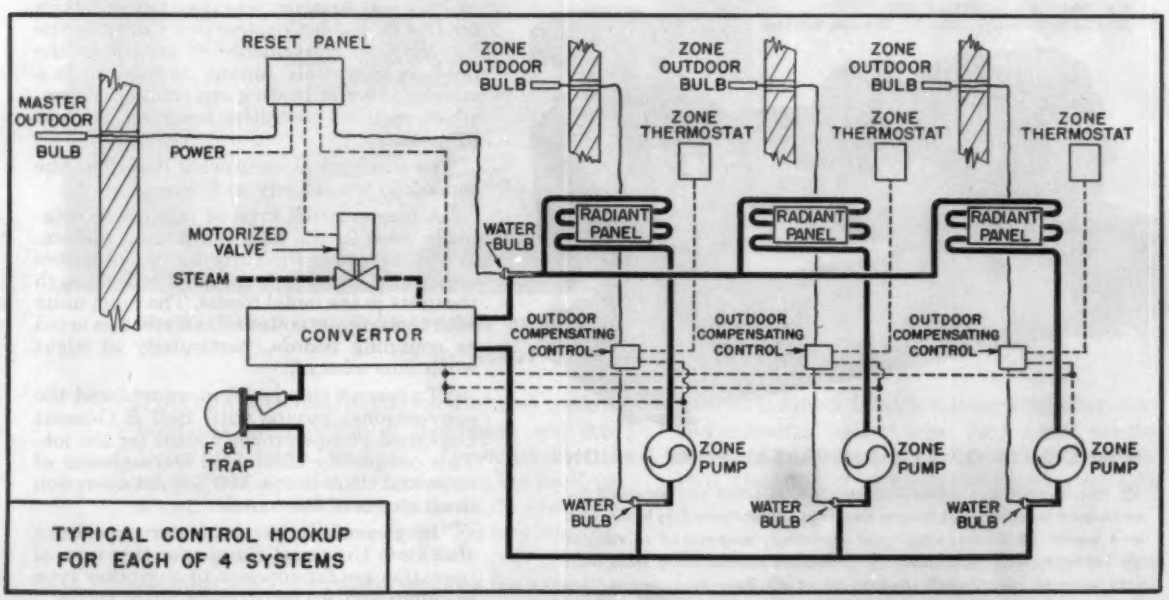
Canadian Licensee: S. A. Armstrong Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

Simple, economical solution of complex heating control problem

...FOR NEW 1000-BED HOSPITAL

Highlights of this SARCOTHERM CONTROL SYSTEM

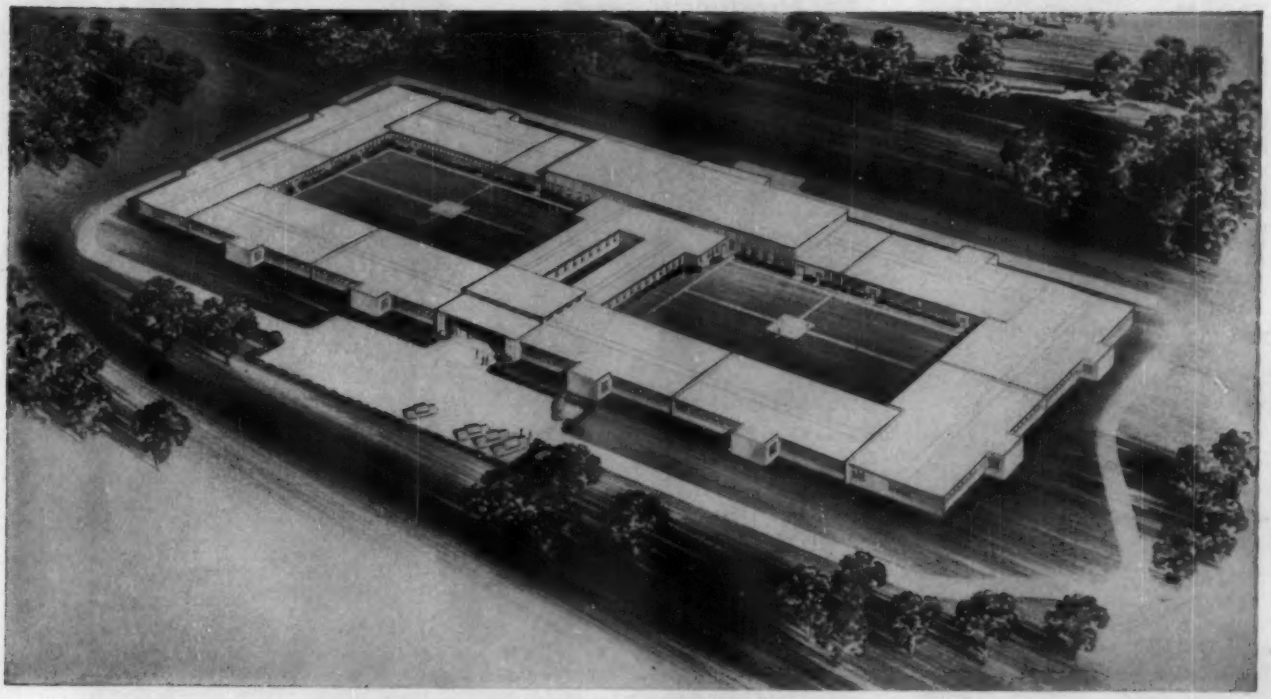
1. Provides *automatically controlled* heating comfort for 13 separate radiant heating zones.
2. Maintains uniform inside temperature in each zone by *automatically adjusting* flow of hot water through system to compensate for changes in outdoor temperature and room load demand.
3. *Automatically controls* flow of steam to each of 4 heat exchangers, varying temperature of hot water supplied to each radiant heating system in response to outdoor temperature changes.
4. *Combines simplicity* with accuracy and dependability . . . instruments are simple, rugged . . . easy to adjust and maintain.
5. *Insures low installed cost* . . . because of fewer controls, less wiring.



UNDIVIDED RESPONSIBILITY

Complete weather-compensated control system plus heating specialties from one dependable source. In addition to Sarcotherm control system components illustrated above, Sarcotherm and Sarco products installed include Sarcofin radiation, thermostats, balancing fittings with access boxes, radiator valves, thermostatic steam traps, Thermo-Dynamic steam traps and other accessories.

WEATHER-COMPENSATED CONTROL SYSTEMS FOR



Milledgeville State Hospital, Milledgeville, Georgia
1000-bed Psychiatric Building No. 2

Equipped with Sarcotherm Weather-Compensated Control System for radiant heating. Architects — Gregson & Associates, Atlanta, Ga. Mechanical Engineers — Ammons, McClure & Caldwell, Atlanta, Ga. General Contractor — Jordan Contracting Company, Columbus, Ga. Mechanical Contractor — Spivey Plumbing & Heating Co., Dublin, Ga.

OTHER ADVANTAGES OF SARCOTHERM SYSTEMS

Application engineering — Sarcotherm engineers, backed by years of experience in heating control systems, assist consulting engineers with individualized system diagrams.

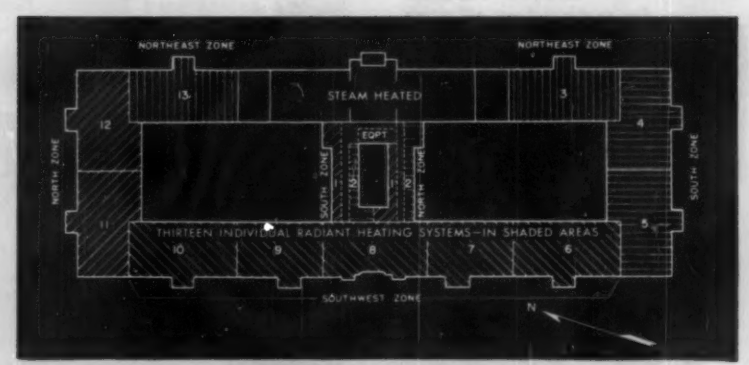
Easy to install — special installation drawings and diagrams of the complete system are furnished for each job.

Easy to maintain and adjust — by regular maintenance men, because of construction simplicity, fewer parts.

On-the-job assistance — to contractors from Sarcotherm's field engineers.

★ ★ ★

FOR COMPLETE CONTROL SYSTEM CATALOG, write . . . Sarcotherm Controls, Inc., 635 Madison Avenue, New York 22, N.Y.



Details of heating system

Building supplied with medium pressure steam from boiler house about 3000 feet away.

Steam supplies direct heat to unit heaters (black area) and indirect heat, through four heat exchangers, to 13 individual floor type radiant heating systems (shaded areas), each of which has its own pump.

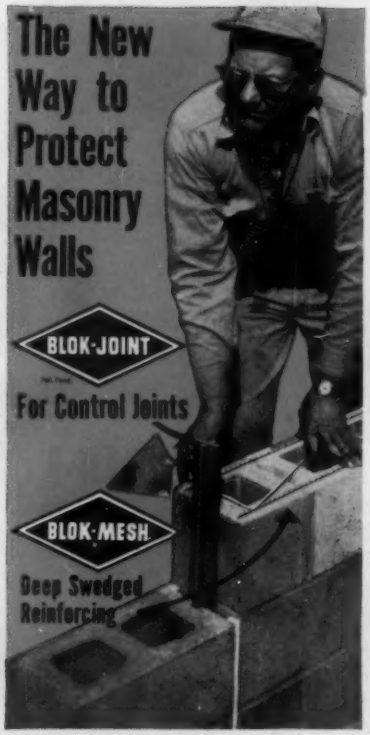
Radiant heating systems consist of serpentine coils of ¾ inch wrought iron pipe imbedded in the concrete floor.

Sarcotherm

AN AFFILIATE OF SARCO CO., INC.

4011-B

STEAM. HOT WATER AND RADIANT HEATING



The trend toward better masonry construction calls for both control joints and reinforcing—use both to provide maximum strength and protection.

BLOK-JOINT is a cross shaped rubber extrusion for making fast, effective control joints. Used with ordinary metal sash blocks. Allows both contraction and expansion in control joints. Can be used in single walls, block walls faced with other masonry and at pilasters or columns.



BLOK-MESH is the masonry reinforcing with the exclusive deep swedges for better bond with the mortar. The well-defined, squared notches give more gripability with the mortar—a tighter bond for more strength.



Write for free Blok-Joint sample and detailed literature on both Blok-Joint and Blok-Mesh "2-point" Masonry Wall Protection

For Details See SEE OUR CATALOG IN SWEETS 4h Car Arch. File — OR WRITE FOR COPY 3c Car Industrial Constr. File

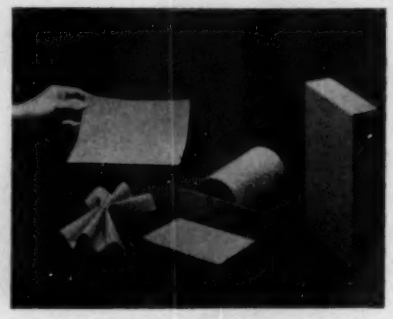
Blok-Joint and Blok-Mesh are products of the Carter-Waters Corp., 2440 Pennway, Dept. AR, Kansas City 8, Missouri.

Available in the U. S. through Concrete Block Manufacturers and Building Material Dealers.

Blok-Joint is distributed in the Canadian Provinces of Alberta, Saskatchewan and British Columbia by CONSOLIDATED CONCRETE INDUSTRIES, Ltd., 9th Ave. & 24th St. East, Calgary, Alberta, Canada.

Product Reports

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Non-Skid Floor Covering

Scotch-Tred floor covering, the manufacturer reports, provides the silence and texture of carpet and the durability of tile. The plastic material comes in 96-ft lengths from 4 in. to 36 in. wide, in strips ¾ in. by 24 in., and in 9 by 9 in. tiles. Its textured bonded-particle surface is non-skid even when wet or oily, according to the manufacturer. *Minnesota Mining and Manufacturing Company, 900 Bush Street, St. Paul, Minnesota.*

Hickory Factory Flooring

End-grain hickory flooring especially made for heavy duty applications is described as lasting up to ten times as long as ordinary flooring. Blocks 6 by 4 in. are available in thicknesses of from 1 to 3 in. *Gamble Brothers Inc., 4601 Allmond Avenue, Louisville, Kentucky.*



Decorative Weather Stripping

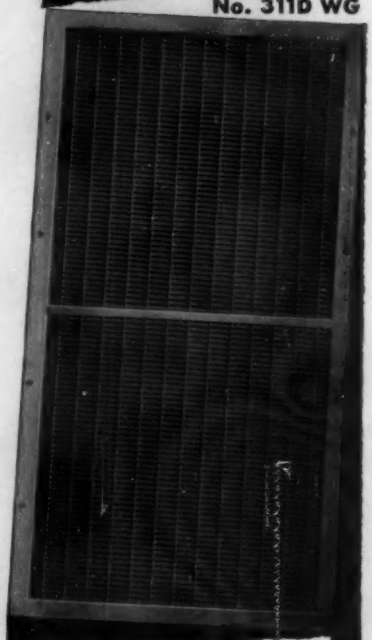
Shrimp-colored weather stripping, mounted on a stainless steel channel for use with *Herculite* doors, is designed to be "a decorative innovation, with overtones of utility and safety. . . ." Its safety function is that it indicates to passersby the presence of a door. The weather stripping is also available in French gray "for more subdued decor." *Schlegel Manufacturing Company, Rochester, New York.*

more products on page 290

"Fabrikated" WALL GRILLES

Made To Order In Special LARGE SIZES

No. 311D WG

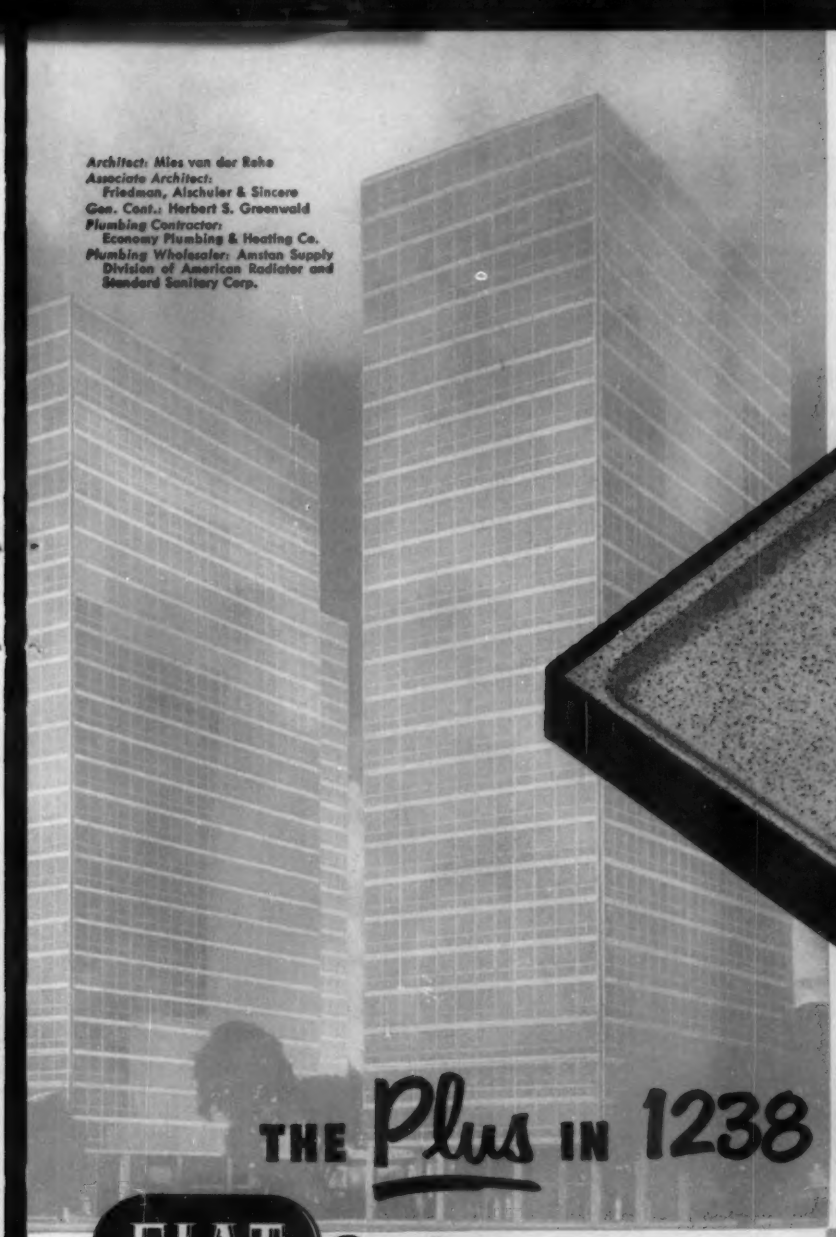


CHECK THESE FEATURES:

- ✓ Vertical or horizontal bars strengthened by interlocking cross bars; no vibration.
- ✓ Tamper-proof. Changes in air distribution cannot be made by unauthorized persons.
- ✓ Mesh (⅜ x 1 11/16) filters 72% of free area yet darkens the duct and reduces highlights from back of the grille.
- ✓ 14 gauge steel solid bars ½" deep—strong enough to be "kick-proof"—(a must for schools).
- ✓ All bars made from round edge stock. No sharp edges. (A must for schools.)
- ✓ The only grille for taking abuse in school gyms and hospital psychopathic wards.

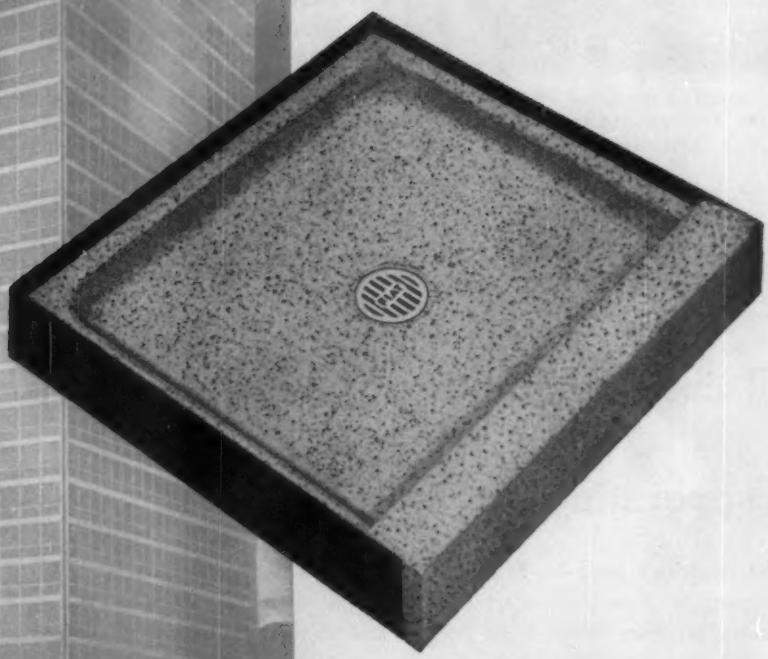
Independent famous "Fabrikated" construction makes these grilles especially adaptable to large sizes for schools, hospitals, hotels, and other commercial buildings. Immediate service because we always stock grille parts for any size.

THE INDEPENDENT REGISTER CO.
3747 E. 93rd St., Cleveland 5, Ohio



Architect: Mies van der Rohe
Associate Architect: Friedman, Alschuler & Sincere
Gen. Cont.: Herbert S. Greenwald
Plumbing Contractor: Economy Plumbing & Heating Co.
Plumbing Wholesaler: Amstan Supply Division of American Radiator and Standard Sanitary Corp.

The new, six building luxury apartment project to be known as 900 Esplanade and Commonwealth Promenade will have FIAT *PreCast Shower Floors in every shower. Added proof that products by* FIAT *set the standards of shower quality.*



THE Plus IN 1238 Plush APARTMENTS

FIAT PreCast SHOWER FLOORS

Only the best is good enough on Chicago's fabulous "Gold Coast"

FIAT Shower Floors permanently answer the problem of shower floor leakage and high costs. Less product cost, less labor cost and less maintenance costs are the benefits of FIAT'S one-piece unit cast in a solid, monolithic slab with genuine marble chips. The FIAT PreCast Shower Floor is simply placed into position and lead caulked to the drain outlet. Once this simple, fast, inexpensive job is completed, the shower wall may then be built of any type material desired; plastic or ceramic tile, marble, plaster or structural glass.

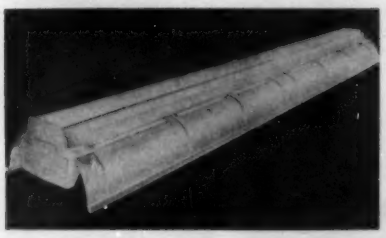
Send for specifications on the complete range of styles and sizes.



FIAT METAL MANUFACTURING CO.
9329 W. Belmont Ave. • Franklin Park, Illinois
Since 1922...First in Showers / *Packaged Showers • Doors • Floors Toilet Room Partitions*
OTHER COMPLETE PLANTS: Long Island City 1, N. Y.; Los Angeles 63, Calif.; Orillia, Ontario, Canada

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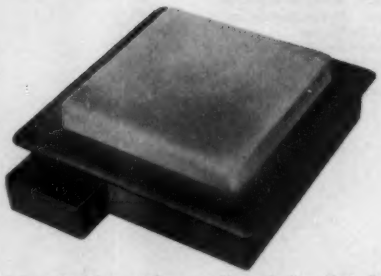
Industrial Fluorescent Lamp



Semi-direct and direct fluorescent fixtures for industrial use come in two- and three-lamp models, 48 and 96 inches long, and can easily be mounted on surface, chain or stems, according to the manufacturer. Metal-framed louvers are also available. *Fluorescent Fixtures of California, 352 South Shaw Road, South San Francisco, Cal.*

Watertight Lighting Fixture

A watertight, recessed downlight, three inches deep, can be used in wet locations. Its steel housing may be used as a pouring form in concrete ceilings, and an external splice box facilitates wiring in continuous



installations. The unit can be fitted with two 100-watt lamps or one 150-watt lamp. *McPhilben Lighting Inc., 1329 Willoughby Avenue, Brooklyn 37, N. Y.*

5 key points in laundry planning

☑ size ☑ equipment ☑ arrangement

☑ operating cost ☑ supply services

The American Laundry Machinery Company's Survey Engineering and Planning Service concentrates simultaneously on these 5 major points. Interrelating problems are solved on the spot, and planning for the entire laundry project can be completed in minimum time.

We will furnish you detailed drawings, floor plan layout, equipment recommendations, estimate of operating personnel, and complete specifications including water, sewer, electrical, steam and/or gas services—everything you need to design an efficient, space-saving laundry department.

This service is available to architects without obligation. Call your nearby American representative, or write.

Willamette View Manor, Portland, Oregon. Architect: Walter E. Kelley, Portland, Oregon. Laundry Equipment: The American Laundry Machinery Company.



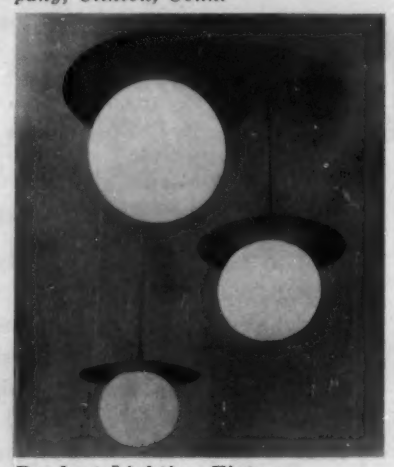
The American Laundry Machinery Company, Cincinnati 12, Ohio

You get more from American



Kingsize Incandescent Globe

A hanging lamp, 45 in. in diameter, with brass chain for hanging, comes in five colors: lemon, aqua, Dresden blue, green, and white. *Heifetz Company, Clinton, Conn.*



Pendant Lighting Fixture

A lighting fixture, consisting of a flat metal reflector in chrome, brass, red, blue, or yellow; and a spheroid of glass in 8-, 10-, and 12-in. diameters is manufactured by *Habitat, Inc., 336 Third Avenue, New York 10, N. Y.*

more products on page 292



FRESH DESIGN...PROVED MATERIAL

Genuine STRUCTURAL CLAY FACING TILE

- There is no substitute for genuine Clay Facing Tile.
- Rich, permanent colors.
- Durable, smooth surfaces clean sparkling new with soap and water.
- First cost is low. A single material and a single trade.
- Modular sizes lay up fast.
- Elimination of maintenance insures tremendous savings.

Now—with increased production and faster deliveries, it's professional to remember—there are no substitutes for genuine Structural Clay Facing Tile and Ceramic Glazed Brick.

FACING TILE INSTITUTE

2556 Clearview Avenue, N. W., Glendale 5-5329, Canton 8, Ohio
1520 18th Street, N. W., Hudson 3-4200, Washington 6, D. C.
1949 Grand Central Terminal, Murray Hill 9-0270, N.Y. 17, N.Y.
228 N. LaSalle Street, Randolph 6-0578, Chicago 1, Ill.

FTI STRUCTURAL

This seal is your assurance of highest quality Facing Tile.

These companies contribute to Facing Tile research and development: **ARKETEX CERAMIC CORPORATION,** Brazil, Ind. • **CHARLESTON CLAY PRODUCTS CO.,** Charleston 22, W. Va. • **THE CLAYCRAFT CO.,** Columbus 16, Ohio • **HANLEY COMPANY, INC.,** Pittsburgh, Pa. • **MAPLETON CLAY PRODUCTS CO.,** Canton, Ohio • **METROPOLITAN BRICK, INC.,** Canton 2, Ohio • **McNEES-KITTANNING CO.,** Kittanning, Pa. • **NATCO CORPORATION,** Pittsburgh 22, Pa. • **STARK CERAMICS, INC.,** Canton 1, Ohio • **WEST VIRGINIA BRICK CO.,** Charleston 24, W. Va.

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Steel Chalkboard



A porcelain-enamelled steel chalkboard, produced under the trade name of Korok, guaranteed to last the life of a new building, can be mounted directly on a wall by means of a special adhesive, or be made the face of a sandwich panel consisting of a one-inch plywood panel and a galvanized steel backing. The Korok sandwiches can be used as partitions or, mounted on rollers, as closet doors. Since the boards are magnetic, papers can be attached to them by means of small magnets. *Enamel Products Company, Cleveland, Ohio.*



Built-In Plaster Chalkboard

A chalkboard built into a wall promises attractive construction savings. Actually a hard coat of *Plawall* plaster, the chalkboard can be applied to masonry or plaster surfaces. A companion product, *Plawall Glaze,* is supposed to provide an impervious wall surface at one third the cost of ceramic tile. The manufacturer claims that the surface can be cleaned repeatedly with soap, detergents, or acids, without being damaged. *Waterproofing Materials Company, 2739 Ludelle St., Fort Worth, Texas.*

Asbestos Board for Laminating

Micro-Flexboard, an asbestos-cement sheet, can be laminated with various metal skins for curtain- and window-wall applications. It can also be covered with wood and plastic veneers, chalkboard, and paints and lacquers. The sheets come in lengths of 8 ft, 10 ft, and 12 ft, all 4 ft wide. *Johns-Manville, 22 East 40th Street, New York, New York.*



Vertical Blind Used as Room Divider

LouverDrape vertical window blinds are available in over 60 colors of vinyl-impregnated fabric, or metal. They are said to provide absolute control of light and air and to be usable as room dividers. The vertical surfaces help to prevent collection of dust and dirt, but, if necessary, they are easy to clean. *Vertical Blinds Corp. of America, 1936 Pontius Avenue, Los Angeles 25, Calif.*

more products on page 296



▲ Architect: John Storrs, Portland, Oregon. Siding of this attractive Club stained with Cabot's Weathering Gray #241.

Redwood trim stained with Cabot's Weathering Brown #144. ▼



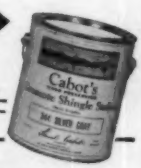
PORTLAND GARDEN CLUB

Cabot's STAINS SPECIFIED

For more details about this handsome building, see the story on page 112. Like so many architect-designed clubs, houses and churches, the Portland Garden Club chose Cabot's Stains because they

- penetrate deeply — actually dye the wood
- give soft weathered effects in only 6-12 months
- enhance the beauty of the grain
- preserve wood from decay, insects, weather
- can be painted over later
- will not crack, peel or blister
- costs less than ½ as much as paint

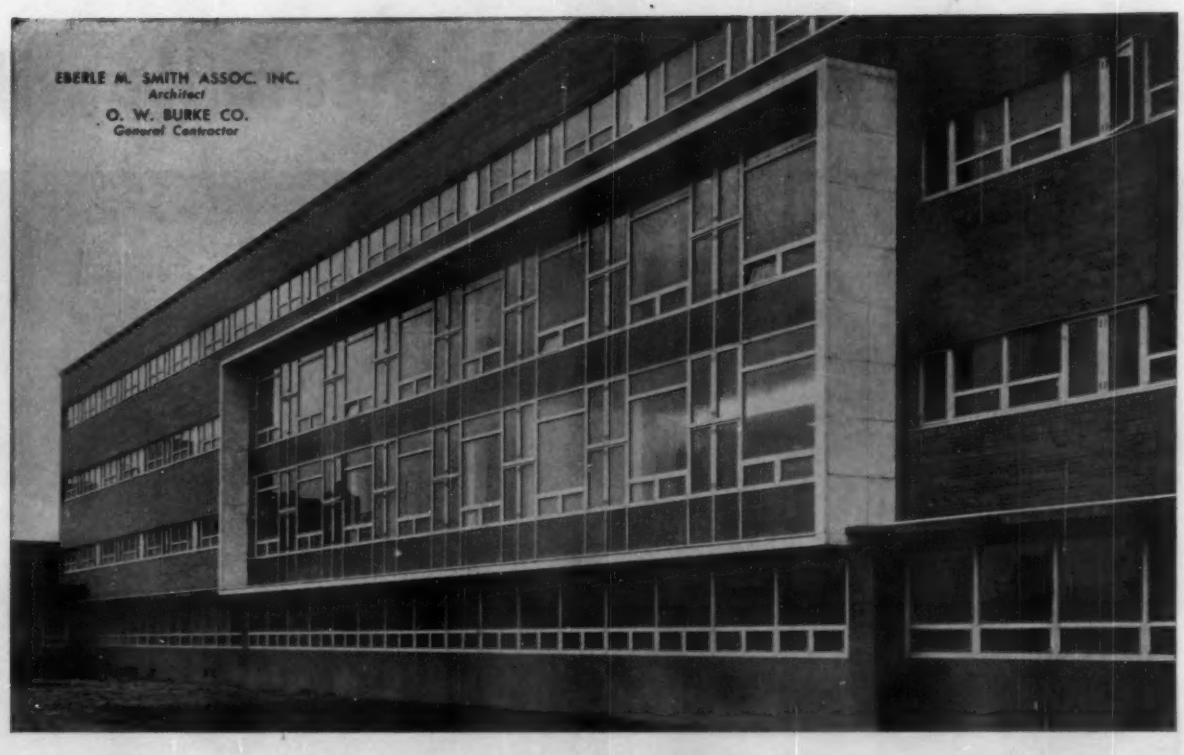
Available in 18 appealing colors



Samuel Cabot

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Please send color card on Cabot's Stains

A quality product from Cabot Laboratories ...manufacturing chemists since 1877



VAMPCO ALUMINUM WINDOWS AND CURTAIN WALLS ACCENTUATE MODERN DESIGN OF THE NEW LAFAYETTE CLINIC

The new Lafayette Clinic in Detroit, Michigan is a beautiful example of how architects throughout the nation are incorporating modern Vampco Aluminum Curtain Walls and Aluminum Windows to combine full natural lighting, modern beauty, functional design, structural strength and durability in the new concepts of modern hospital design.

Note how the Curtain Wall section in the center of this magnificent hospital building accentuates the modern lines and the unusual lighting and ventilating of the building itself.

Vampco Aluminum Windows are available in the widest range of types to meet every architectural need. They include: casement, combination casement, awning, intermediate projected, curtain wall of varying sizes and thicknesses, heavy construction, glass block and custom-designed types. Find out how VAMPCO'S special designing service can help you solve your unusual building problems most economically and efficiently . . . mail coupon below today!

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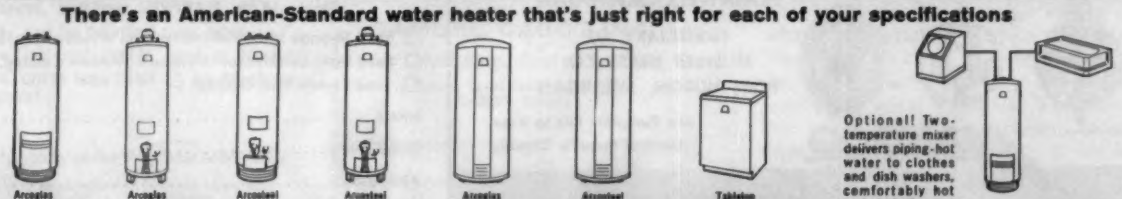
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New matched ensemble will



The graceful lines of this new American-Standard matched ensemble will add beauty to your most exciting bathrooms . . . prestige and quality to your finest homes.

There's an American-Standard water heater that's just right for each of your specifications



4 gas models

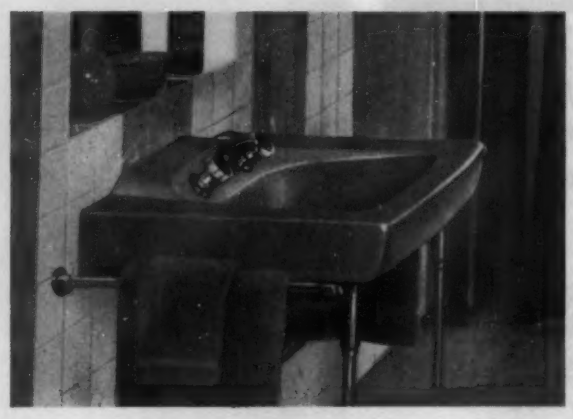
3 electric models

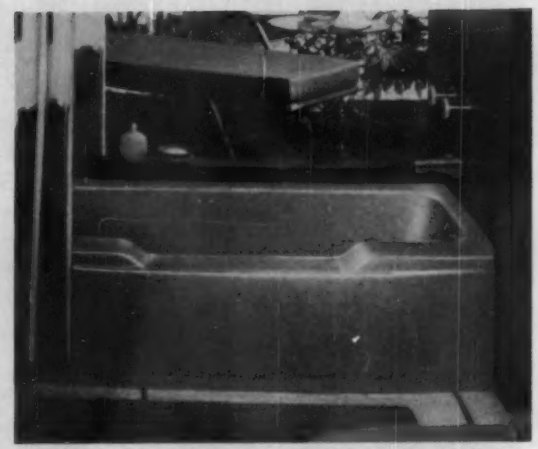
make any bathroom a show place

This exciting new American-Standard bathroom-fixture ensemble was designed especially for those who want a matched bathtub, water closet and lavatory. Note the sweeping lines of each of these de luxe fixtures.

The contemporary look is set by the apron of the bathtub, which forms an unbroken curve . . . free of decorative lines. This look is repeated in the lavatory which provides a designed-for-efficiency bowl with graceful, sloping fittings panel. The water closet has the same simple lines, which blend into the low tank. This new matched ensemble by American-Standard comes in six colors and white.

FOR MORE DETAILS on this new ensemble call your American-Standard representative or write: American-Standard, Plumbing and Heating Division, 40 West 40th Street, New York 18, N. Y.





Recessed bathtub has a step-down in center of rim that offers easy entry, becomes a convenient seat. Made of lifetime enameled cast iron.



One-piece-construction toilet of genuine vitreous china features extra-quiet flushing action. Saddle seat and cover snap off for easy cleaning.

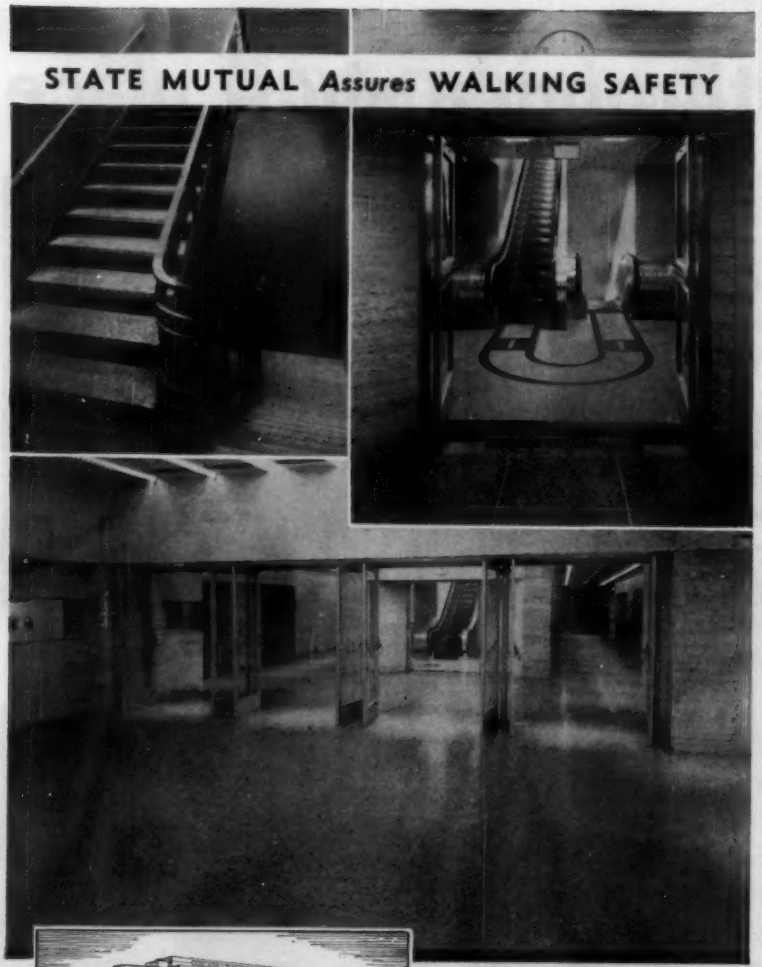
Trim lavatory has wide ledges for toiletries, concealed overflow. Made of easy-to-clean vitreous china. Comes with Monogram or Quality fittings.

American-Standard and "Standard"® are trademarks of American Radiator & Standard Sanitary Corporation

AMERICAN-Standard PRODUCTS

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PLUMBING AND HEATING DIVISION



STATE MUTUAL *Assures* WALKING SAFETY



Architects: Hoyle, Doran and Berry

Multi-million dollar new home of

State Mutual Life Assurance Company of America, Worcester, Mass.

Lobbies, escalator landings, twenty-six stairways (pre-cast treads) are made safe in any kind of weather by terrazzo containing ALUNDUM Aggregate. These safe, long wearing walking surfaces are in keeping with the beauty of this outstanding structure.

See our catalog in Sweets or write for a copy of No. 1935 R.

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ALUNDUM AGGREGATE for Terrazzo and Cement • ALUNDUM STAIR and FLOOR TILE

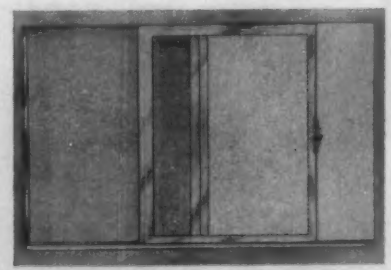
Product Reports

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Insulating Window Uses Plain Glass



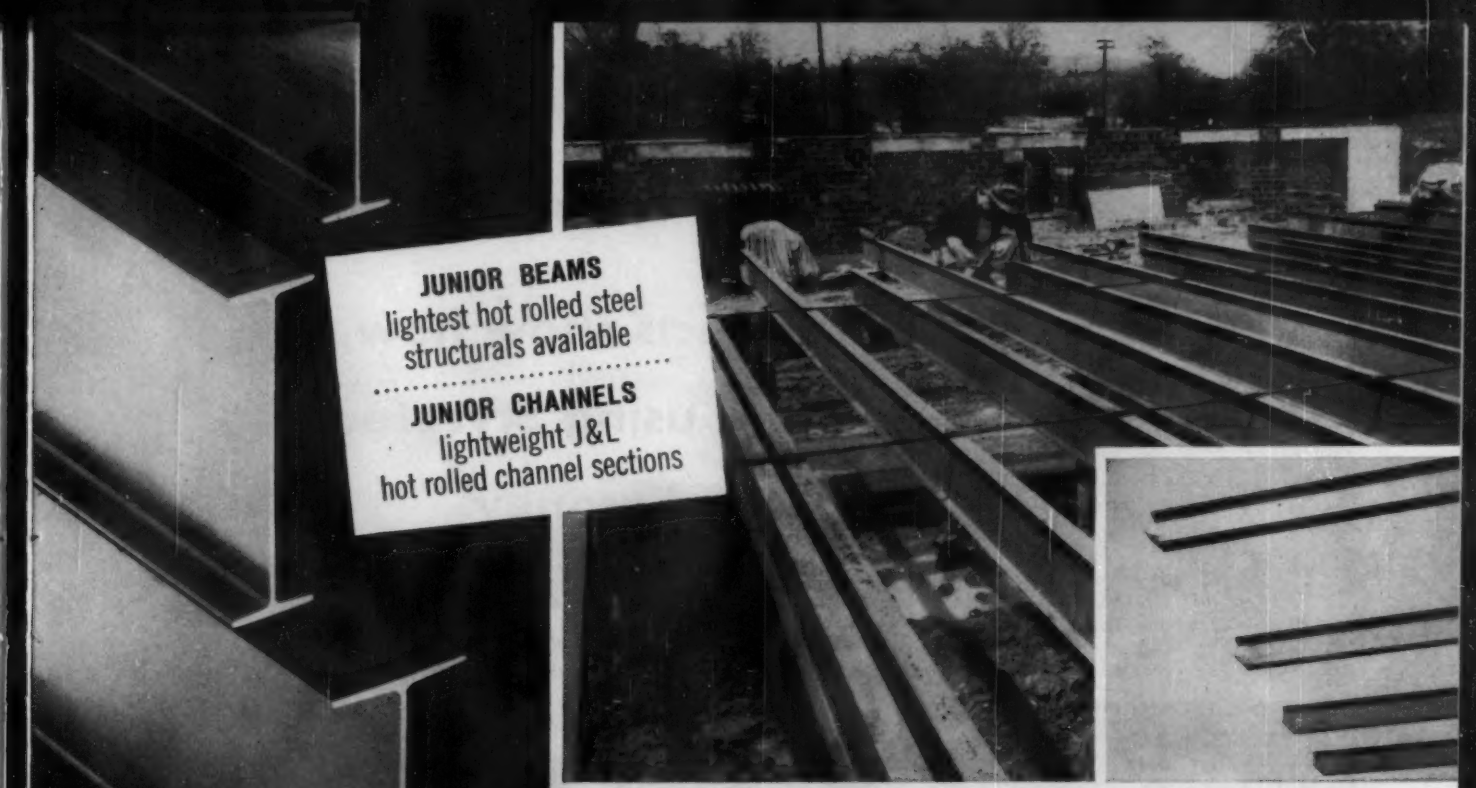
"Blanket of air" insulation between panes of the *Fleetlite* Picture Slide Window is claimed to eliminate the need for special insulating glass. Both the center picture window and the flanking sliding units are removable from inside for easy cleaning. *Fleet of America, Inc., Dept. AR-658, 2015 Walden Avenue, Buffalo 25, New York.*



Wood and Aluminum Sliding Window

The *De-Cor* sliding window is designed to incorporate the best features of both wood and aluminum windows. Its wooden frame is designed to protrude beyond the face of a building, thus avoiding the flat façade characteristic of set-in windows, according to the manufacturer. Aluminum is used in moving parts for lightness and ease of operation, wood for the frame to avoid contact between lime mortar and aluminum. *Corona Manufacturing Corporation, 11300 Tuxford Street, Sun Valley, Calif.*

more products on page 300



10″ (9#) Junior Beams are used in this two-story motel as second floor joists and as roof purlins. Second floor system and balcony will support a 40 pound per square foot live load.

"Unique cantilever design utilizes Junior Beams"

. . . says structural designer

Junior Beams play an integral part in unusual design of the new 210 unit South Gate Motor Hotel in Arlington, Virginia, one of the finest on the eastern coast. "We used Junior Beams in a cantilever design that placed the balcony floor at the same elevation as the second floor," reports Mr. George Fortune, of Fortune Engineering Associates, Alexandria, Virginia, the structural designer.

"This design eliminates steps from balcony into the units. The balcony is free of vertical supports," Mr. Fortune said. The three principal buildings utilize 170 tons of 10″ (9#) Junior Beams, lightweight steel structurals made by Jones & Laughlin Steel Corporation. The Junior Beams are used as second floor joists and as roof purlins. Fabrication and erection was done by the Southern Iron Works, Springfield, Virginia.

Two flights of stairs at each end of the balcony provide easy access to second floor units. The stairs are fabricated of 10″ and 12″ Junior Channels, lightweight J&L hot rolled channel sections.

According to Mr. John C. Wright, owner-contractor, the design provides fireproof, attractive buildings at low costs.

Junior Beams are economical and easy to adapt in a wide range of architecture. Economies in fabrication and erection reduce your total cost per square foot.

Investigate advantages of these lightweight Junior Beams and Junior Channels. Call your local warehouse or write Jones & Laughlin, 3 Gateway Center, Pittsburgh 30, Pennsylvania.

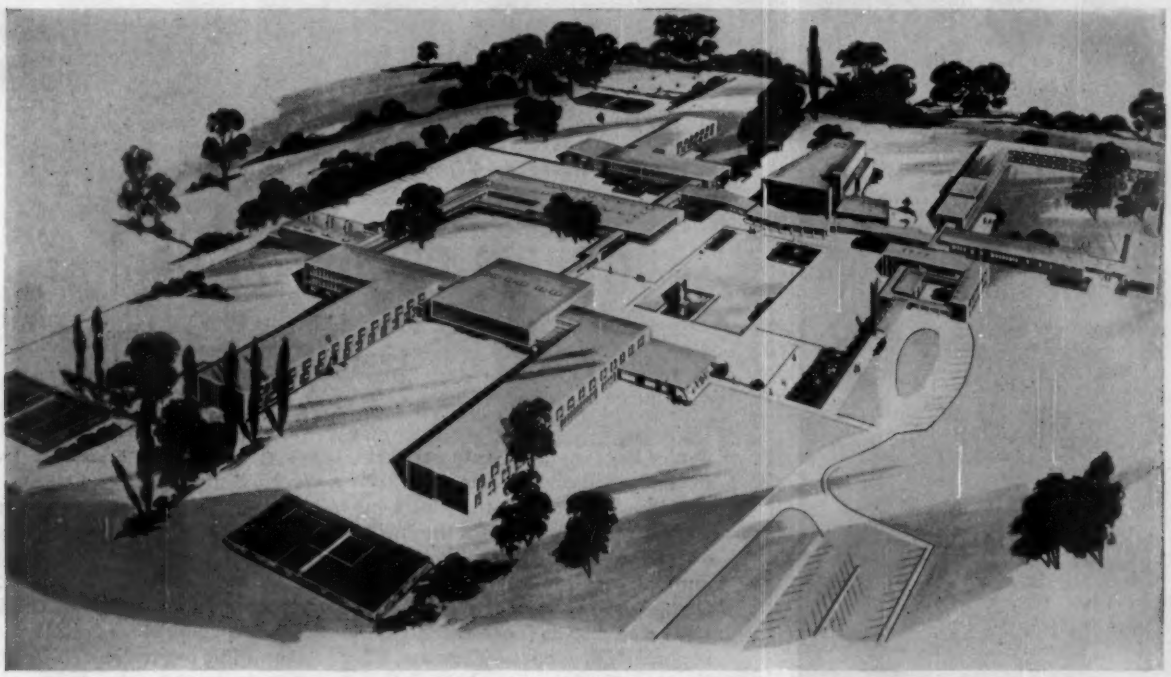
J&L STEEL

Jones & Laughlin Steel Corporation

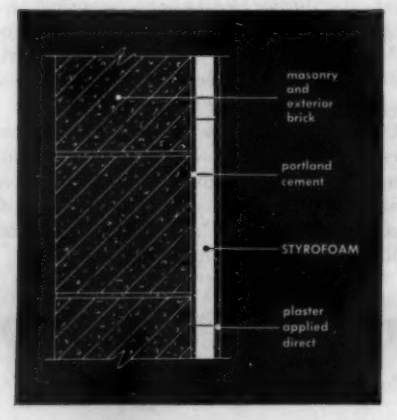
PITTSBURGH, PENNSYLVANIA

Milwaukee architects show how new building method using Styrofoam® saves time and money

John Brust, A.I.A. of Brust & Brust, Milwaukee, discusses the speed, economy and quality of masonry-insulation-plaster construction



Notre Dame Of The Lake, Mequon, Wisconsin. Building contractors: Gebhard-Berghammer, Inc., Ed. Steigerwald & Sons, and H. Schmitt & Son, Inc., all of Milwaukee.



"We rate Styrofoam* as the most economical and feasible recommendation from the standpoint of our client, the most workable for the contractor, and of the highest insulating quality," says Mr. Brust. "It has a positive moisture resistance, a flexible expansion rate, and it adheres well to mortar and plaster.

"In this project at Notre Dame Of The Lake College For Sisters, all exterior walls are insulated with 1" and 1½" of Styrofoam, plastered on the inside. The wall cross section consists of 4" of exterior brick, 8" of lightweight concrete block backup, ¾" mortar, Styrofoam and plaster (see sketch). In all, 100,000 sq. ft. of Styrofoam are used. It is our experience that 1" of Styrofoam on outside walls keeps them warm to the touch, even in zero weather."

*STYROFOAM is a registered trademark of The Dow Chemical Company





"SEVERAL 8-FOOT BOARDS of lightweight Styrofoam can be easily carried to the job site by one man. In just one stroke, Styrofoam is cut to 48-inch lengths using the sharp edge of a mortar trowel. Not only does Styrofoam cut easily, but the cut surface is as smooth as if done by machine. This facilitates working around pipe, conduit, duct work, etc."



"AN AUTOMATIC MORTARING JIG evenly coats each 4-foot section of Styrofoam with ¾" of mortar. The boards are pushed manually through the box and passed on to the installation man who puts them into position. Styrofoam adheres directly to the masonry, eliminating furring. This operation is so fast and simple that we achieve time reduction and cost savings by its use."

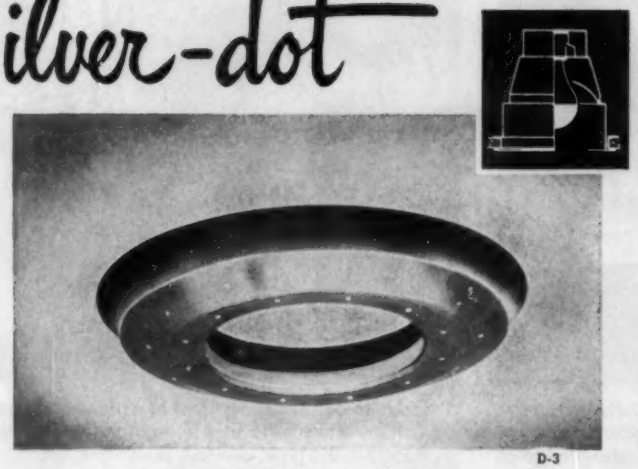


"PLASTERING DIRECTLY over Styrofoam eliminates complete operation of lath installation, permits substantial savings in cost. Styrofoam has the flexibility to give with expansion and contraction, provides a firm base for plaster."

For more information about Styrofoam, write to THE DOW CHEMICAL COMPANY, Plastics Sales Department 1924G, Midland, Michigan.

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Silver-dot



D-3

DUAL PURPOSE • SILVERED BOWL
DOWNLIGHT
For both General and Accent Lighting

Silver-dot will provide a 35° or 50° cone of light for either general or accent lighting by simply changing the type of silvered bowl lamp used. A double-duty downlight that can be easily altered to meet all conditions for downlighting. Silver-dot is also more efficient and more economical than any comparable downlight as shown by these facts*...

1/3 THIRD

LAMP COST...Lamp replacement costs for most popular types of downlights using reflectorized lamps will approximate three times the cost of lamp replacements for Silver-dot units.

2/3 THIRDS

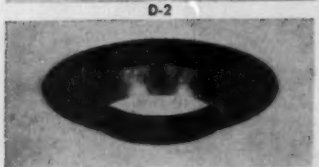
POWER COST... Since many of the commonly used downlight devices employ 150 watt lamps, the 100 watt Silver-dot units will cost only two thirds as much to operate.

3 TIMES

LIGHT OUTPUT... Performances of downlights varies greatly with design and light distribution. In general however, Silver-dot units produce more effective footcandles within the designed beam. This increase in illumination averages three times that afforded by other devices.



D-2



D-1

DECORATIVE FACE PLATES

D1—A contemporary, functionally designed flared face plate, projecting ¾" below ceiling line, and providing a 4" circular aperture.

D2—This features a 4" diameter vertical tube extending downward 1" from ceiling line, perforated to provide an attractive sparkling effect.

D3—A 2-section louvered face plate, providing a halo effect on adjacent ceiling areas. Lower section, which projects 1" from ceiling, has sparkling perforations. Aperture is 4" in diameter.

FINISHES—Polished brass, satin chrome, white or any of six colored enamels.

*Send for "A Factual 1-2-3 Comparison of Downlighting Devices" for complete details

584

SILVRAY LIGHTING, INC.
BOUND BROOK, NEW JERSEY

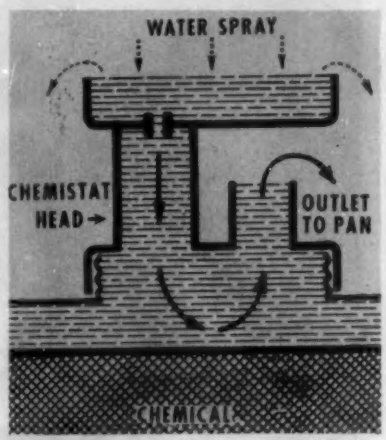
Product Reports

continued from page 296



Snap-On Pipe Insulation

A snap-on lagging, claimed to be unusually resistant to physical and chemical damage, is designed for use at temperatures between –200 and +250 degrees F. According to the manufacturer, the urethane insulation will not rot or decay, and is not affected by vermin or high humidity. It is performed to fit pipelines and fittings, and will nest with another layer if double thickness is required. *National Aniline Division, Allied Chemical Corp., 47 West St., New York 6, New York.*



Corrosion Control for A/C Systems

Chemistat is a new device for adding corrosion- and scale-resistant chemicals to circulating water in air conditioning systems. It is placed in the pan of a condenser or cooling tower in such a way that some of the cooling water falls into it, picks up some of the chemical and spills over into the pan, from which the newly treated water is circulated through the system. *Water Service Laboratories, 615 West 131 Street, New York 27, New York.*

Lennox Research School, Des Moines, Iowa, is a development and research project of Lennox Industries, Inc. Outside dimensions of the split level two-room unit are 46' x 71'-10".

JOB DATA: Space provided: Two classrooms each 28' x 30', 10' x 71' corridor, three toilet areas. **Exterior walls:** brick, glass and wood. **Interior walls:** brick and wood paneling. **Heating and ventilation:** Lennox Comfort Curtain system featuring forced air with automatically controlled dampers to mix fresh and recirculated air. **Lighting:** Low voltage fluorescent lighting balanced with incandescent fixtures. **Floors:** quarry tile in entry, asphalt tile in classrooms. **Roof surface:** asphalt shingles over 2"x6" tongue-and-groove sheathing. **Ceiling:** acoustical tile in corridors; exposed timber sheathing in classrooms. **Cost** per square foot: $15.00

Architects: Perkins and Will, Chicago. Contractor: Lovejoy Construction Company, Des Moines



Advanced School Architecture



Cantilevered glulam beams extend the roof to form a canopy which protects the window areas from the sun. Classrooms receive natural light from three sides.

...with glulam beams by Timber Structures, Inc.

Natural beauty... pleasant atmosphere ...complete safety... easy maintenance ...and economical construction all are combined in this practical research laboratory of modern school design.

Along with advanced heating and lighting, the school features clear span interiors, with the roof supported by handsome double curved glulam beams. These were chosen to obtain a soft flow of sweeping space from wall to wall. Spaced at six feet, they provide interiors that are warm and light in feeling, with desired center height and ground-hugging eave lines. Cantilevering six feet beyond the sidewalls, they support a canopy which shields the large windows from direct exposure to the sun.

Other applications of glulam timber members by Timber Structures, Inc. include girders, arches and trusses for classrooms, gymnasiums, libraries, auditoriums, field houses and vocational shops. Outstanding examples of these applications are contained in the illustrated brochure, "Timber Framing for Modern Schools". Get your copy from your Timber Structures representative, or write us for it.

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Contractor: George A. Fuller Co., New York City, N. Y.

Venerable age . . . dynamic youth stand side by side

IN THE ILLUSTRATION HERE, the happy juxtaposition of a house of worship and the new home office building of the Mutual Benefit Life Insurance Company in Newark, New Jersey, underscores a proud architectural heritage and the dynamism of today's creations.

It is with good reason that glass is playing an important role in contemporary structures. And this impressive modern building is an outstanding example of the increasing use of Pittsburgh Glass as a basic material in the planning of structures of all kinds.

Pittsburgh's SPANDRELITE® glass in color is utilized in this building for the spandrel areas; Pittsburgh Polished Plate Glass for the vision areas; HERCULITE® Tempered Plate Glass Doors, equipped with PITTCOMATIC® automatic door openers; SOLEX® Heat-Absorbing Plate Glass for more comfortable interiors; quality PENNVERNON® Window Glass for openings where sun-heat is not a problem; Heavy Plate Glass for room dividers and other interior applications; Pittsburgh Mirrors in the rest rooms. All of these *Pittsburgh* products helped to create a structure which is at once both beautiful and functional.

In planning new buildings, or in remodeling existing structures, we suggest that you give prime thought to Pittsburgh Glass. It will help you design them *better*. For assistance on specific glass problems, contact your nearest Pittsburgh branch for the name of the architectural representative serving your area. There is no obligation on your part.

PITTSBURGH GLASS

. . . the basic architectural material

75 ANNIVERSARY 1883—1958 PPG

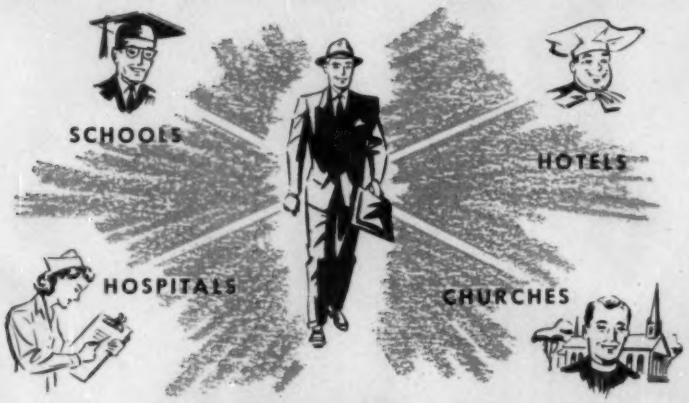
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MEANS THE SAME TO EVERYONE...



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FOOD SERVING EQUIPMENT

When anyone sees "Custom-Bilt by Southern" in your specifications, he knows you are recommending the best! Modern in design, versatile in use, and dependable in performance, this is the high quality line of food serving equipment.

For capable layout and specification assistance, consult your "Custom-Bilt by Southern" Dealer today. Thoroughly qualified by training and experience, he is a specialist in the planning and equipping of efficient food serving facilities. Whatever the project on your boards, whether a school, hospital, hotel, restaurant, church or industrial plant, let him assist you in laying out the food service operation.

91 National Award Winning Installations

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16

Office Literature

U. S. Government Specifications

. . . *for Adhesives, Coatings, Sealers* lists military, army and federal specifications, their definitions, and the *3M* products that meet them. 23 pp. *Adhesives, Coatings & Sealers Div., Minnesota Mining & Mfg. Co., 423 Piquette Ave., Detroit 2, Mich.**

Sterilizers (A.I.A. 35-K-4)

Architects' Handbook contains pertinent data on the design and installation of sterilizing equipment, as well as specific descriptions of various types of sterilizers and their function. Complete dimensional data, roughing-in drawings, and electrical, plumbing and venting specifications are provided for all types. 24 pp. *Wilmot Castle Co., 365 East Ave., Rochester 4, N. Y.**

H & K Perforated Materials

General Catalog No. 75 illustrates available patterns and gives technical data on perforated metals and their uses. 156 pp. *Harrington & King Perforating Co., Inc., 5624 Fillmore St., Chicago 44, Ill.**

Store Equipment

. . . *for Store Planning* (A.I.A. 35-H-5) Catalog E9 covers complete line of *Serva-Sel* store merchandising equipment. 36 pp. *Frederic Weinberg Co., 145 W. Columbia Ave., Philadelphia 22, Pa.*

Lighting by Good (A.I.A. 31-F-2)

Provides full details on construction and installation of *Good* line of fluorescent troffers, commercials, geometrics, strips and industrials. Dimensional data, light curves, coefficients of utilization and complete engineering data are also included. *Good Mfg. Co., 1015 N. Halsted St., Chicago 22, Ill.*

Lighting Dynamics Catalog

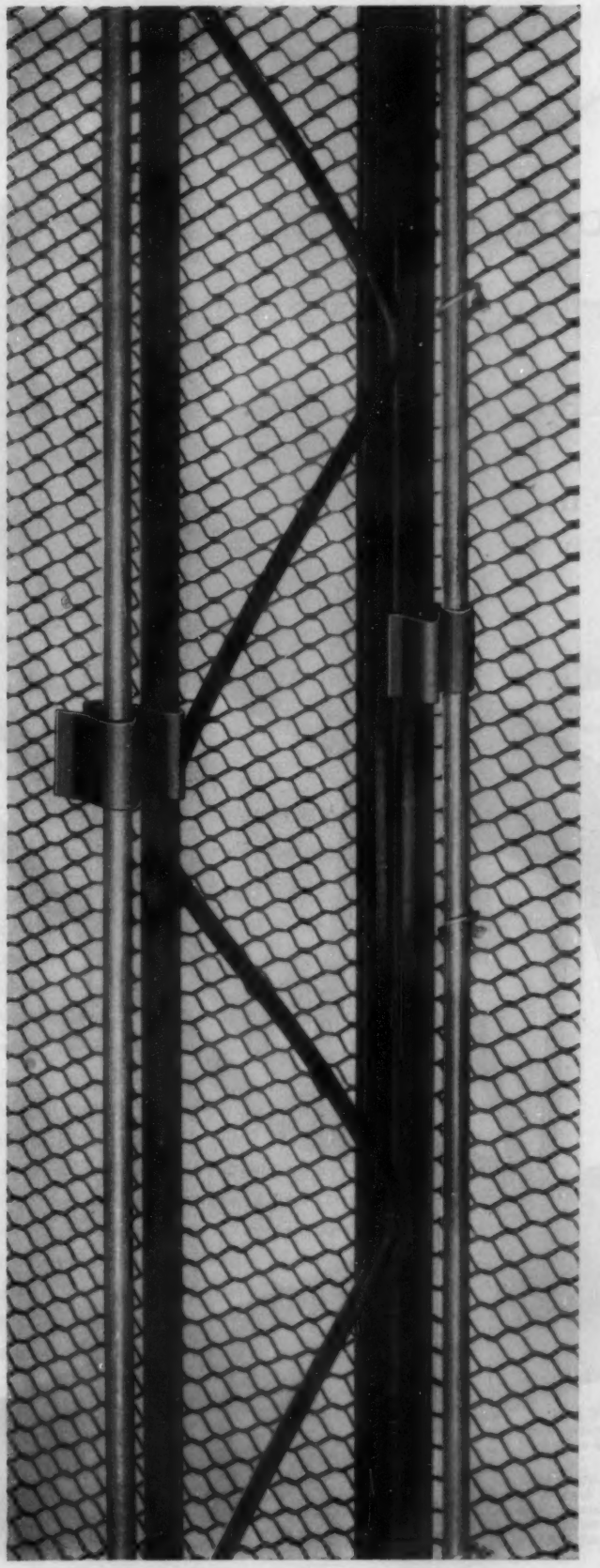
Covers complete line of fixtures with "idea renderings," photometric data (calculated by the interflectance method), mounting information and cost data on each. *Lighting Dynamics, 802 W. Whittier Blvd., Whittier, Calif.*

Headerduct Underfloor Wiring

Gives descriptions, specifications and installation data on ducts and fittings for electrical feeder distribution systems for cellular steel floors. 32 pp. *National Electric Products Corp., Gateway Center, Pittsburgh, Pa.**

** Additional product information in Sweet's Architectural File, 1958*

more literature on page 308



GOLD BOND Holostud Resilient Clips hold the plaster wall away from the studs and absorb most wall-damaging shocks from structural movement. Lath and plaster virtually "float" on spring steel clips...plaster cracking is reduced to a minimum. Based upon results of the newest testing methods, Gold Bond Holostud Resilient Clips prove extremely effective also in reducing sound transmission through plaster walls.

New Gold Bond Holostud Resilient Clips reduce plaster cracking!

The Resilient Clips snap onto the flange of Gold Bond Holostuds. ¼" Pencil Rods are then snapped to the clip which automatically furrs them out ¼ inch away from the face of the stud. Metal Lath is wired to the vertical pencil rods as an excellent base for the plaster wall.

Find out how the new Gold Bond® Resilient Clips can help eliminate your plaster cracking. Write Dept. AR-98, National Gypsum Company, Buffalo 2, New York.

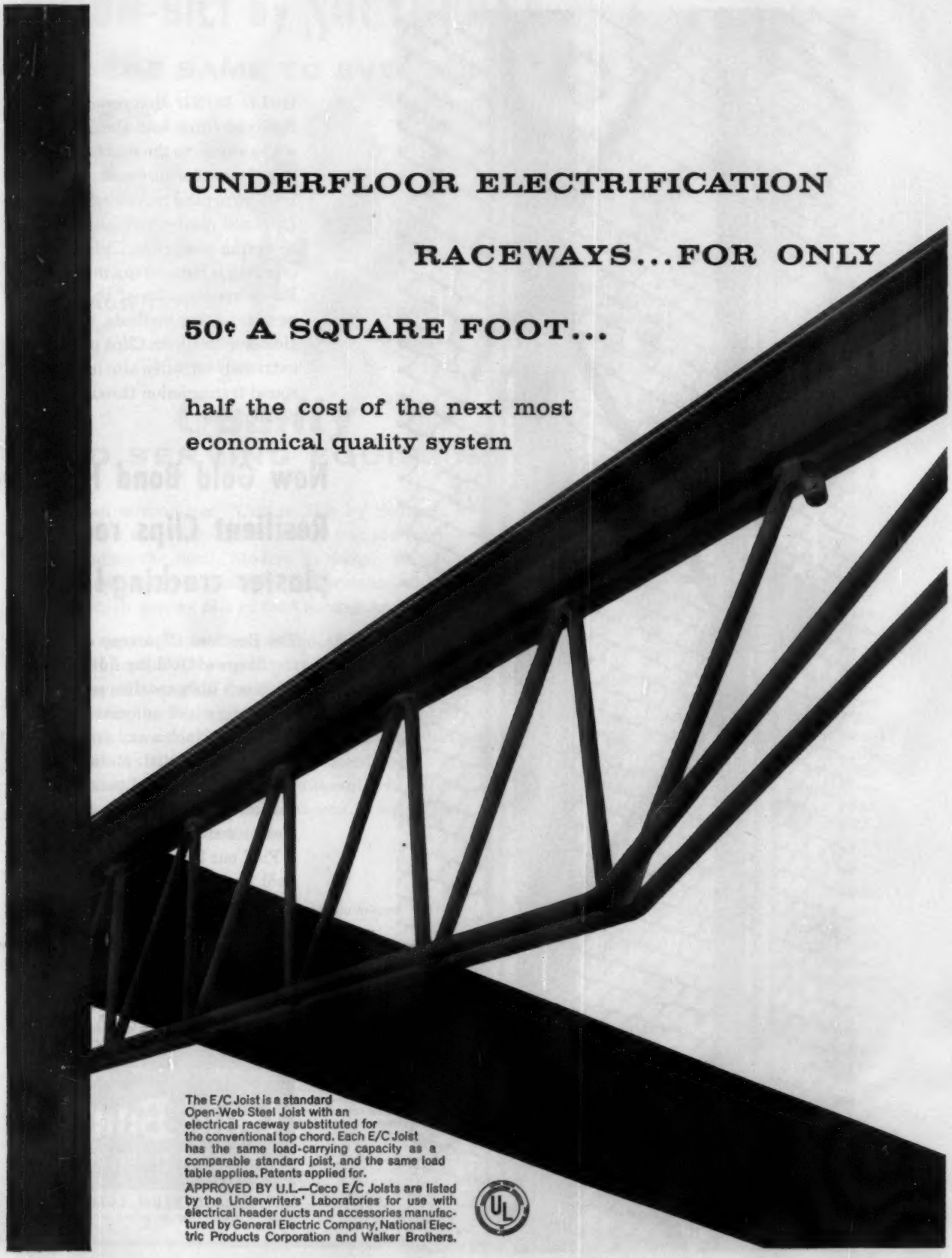
Gold Bond
BUILDING PRODUCTS
NATIONAL GYPSUM COMPANY

UNDERFLOOR ELECTRIFICATION

RACEWAYS...FOR ONLY

50¢ A SQUARE FOOT...

half the cost of the next most economical quality system



The E/C Joist is a standard Open-Web Steel Joist with an electrical raceway substituted for the conventional top chord. Each E/C Joist has the same load-carrying capacity as a comparable standard joist, and the same load table applies. Patents applied for.

APPROVED BY U.L.—Ceco E/C Joists are listed by the Underwriters' Laboratories for use with electrical header ducts and accessories manufactured by General Electric Company, National Electric Products Corporation and Walker Brothers.



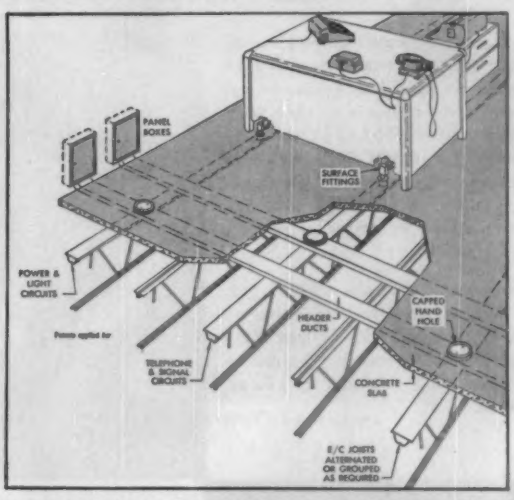
In this case, pairs of E/C Joists are alternated with pairs of standard joists at 18" o.c., and tie in with a two-duct system at 6'-0" o.c. The header ducts here were installed during a 4" snowfall, demonstrating that construction can proceed in bad weather.



E/C Joists can be substituted directly for standard joists to provide as many electrical raceways as desired. The two header ducts, shown horizontally in the foreground, feed wires into the E/C Joists through the hand-holes in the center of the photograph.

You save with Ceco Electro-Channel Steel Joists because they serve a double purpose...

A new product that reduces costs and increases utility makes welcome news. Such a product is the Ceco Electro-Channel Steel Joist, which provides raceway systems for top-quality underfloor electrification for as little as 50¢ a square foot. This is half the cost of the next most economical quality system. The saving is possible because E/C Joists do two jobs . . . carry the electrical as well as the structural loads. Included with the Ceco system are header ducts, hand-holes and markers, installed—as well as the E/C Joist integral raceways. The 50¢ buys a two-duct system on 6'-0" centers, and represents the cost over and above standard steel joist floor framing. Comparable savings are offered in three-duct arrangements. Call your Ceco engineer or send coupon for manual. Ceco Steel Products Corporation—Sales offices, warehouses and fabricating plants in principal cities. General offices: 5601 West 26th Street, Chicago 50, Illinois.



Electrical, telephone and signal wires can be run from the panel boxes down through the heater duets, into the top chord of the E/C Joist and up through the surface fittings to desks located anywhere on the floor. Whenever desks are moved, surface fittings can be placed along the joists to service the new positions.

CECO

IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE

Steel Joists / Steelforms / Concrete Reinforcing
Curtainwalls, Windows, Screens, Doors / Cecoframe
Buildings / Roofing Products / Metal Lath

AR

CECO STEEL PRODUCTS CORPORATION
5601 West 26th Street, Chicago 50, Illinois

Please send Introductory Manual No. 3011 covering Ceco Electro-Channel Steel Joist Construction.

name _____ position _____
firm _____
address _____
city _____ zone _____ state _____

"...highest degree of sound proofness possible in a movable wall"



— from a letter by A. Joe Crocy, Vice-President, The DINKLER-PLAZA, Atlanta. Alexander & Rothschild, Arch.

Fairhurst®

UNITFOLD® FOLDING WALLS

In the Dinkler-Plaza banquet room, Unitfold Walls are used to create as many as six separate areas. Sound between these rooms is blocked with the efficiency of a 10" to 12" plaster-coated SOLID BRICK WALL. This is done through double-run wall sections, lined with acoustical material and separated by sound retarding dead-air space.

All Fairhurst Walls are solid, rigid, with virtually unlimited choice of decor. Write Dept. AR for free illustrated booklet describing Fairhurst solutions to perplexing space problems.





Units fold compactly to one side at the Dinkler-Plaza. Possible variations allow complete concealment of wall in special pockets.

Handsome grained veneers give the appearance of a permanent wall.

John T. Fairhurst Co., Inc.
45 West 45th Street New York 36, N. Y.
FAIRHURST . . . First Name in Folding Walls

Office Literature

continued from page 304

Timely Drafting Templates
Gives size, scale, description and uses for each of 28 drafting templates and sets. 8 pp. *Timely Products Co., P. O. Box 416, Basil, Ohio.*

The Incinerator Blue Book
Presents complete information on all phases of incinerator selection, installation and operation for every type of refuse destruction. 16 pp. *Joseph Goder, Inc., 4241 N. Honore St., Chicago 13, Ill.*

Stress Grade Guide
Tabulates stress grades, on the basis of extreme fiber in bending values, of commonly used items of softwood construction lumber in 2 to 4 in. thicknesses. *Southern Pine Assn., P. O. Box 1170, New Orleans 4, La.*

Electric Booster Heaters
Bulletin D-50U includes selection and installation data on electric booster heaters to supply large volumes of hot water for dishwashing machines. 20 pp. *Industrial Engineering & Equipment Co., 24 Hanley Industrial Ct., St. Louis 17, Mo.*

Today's Better Schools
. . . *Are Built of Wood* (A.I.A. 19-A-1) Presents step by step picture stories on actual school construction projects, with substantiating cost and construction data, and sketches of labor and cost saving wood floor systems. 12 pp. *West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland 5, Ore.**

Prefab Waterproofing and Roofing
Gives general information, detailed specifications, and drawings on waterproofing, new roofing and roof maintenance with prefabricated materials. *Twinsburg-Miller Corp., P. O. Box 207, Twinsburg, Ohio.**

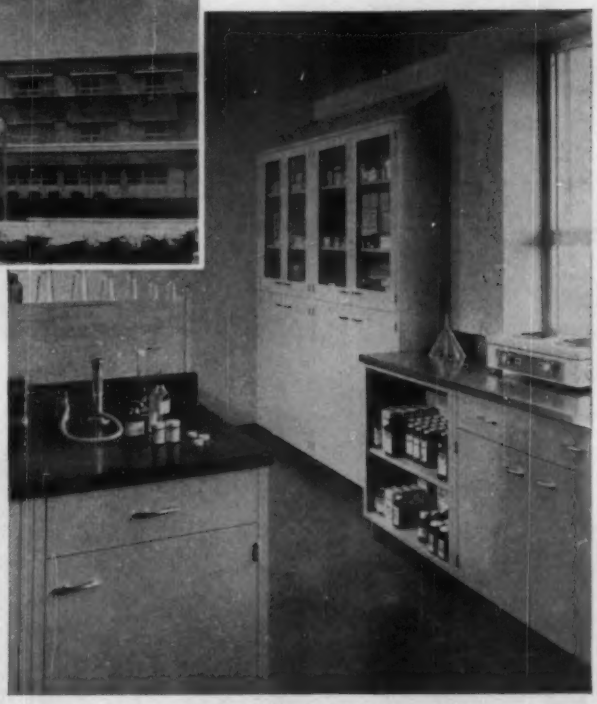
Building to Fit
. . . *Your Handling Job* Material Handling Industry Report 102 discusses aspects of material handling to be considered in planning industrial plant. *The Material Handling Institute, Inc., Suite 759, One Gateway Center, Pittsburgh 22, Pa.*

Panel Fires
Describes and illustrates British-made line of *Panel Fire* electric heaters. 12 pp. *Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.*

** Additional product information in Sweet's Architectural File, 1958*

more literature on page 312





Pharmacy

Hospital Casework

by *St. Charles*

At McDonough District Hospital,
Macomb, Illinois

Architect: Lankton-Ziegele-Terry and Associates



Section Examination



Patient Wardrobe



General Laboratory

No two hospitals are alike, in that each has its own special requirements for equipment. Accordingly, when it became necessary to decide on equipment for the new McDonough District Hospital, the choice was St. Charles.

Throughout the hospital field, St. Charles is becoming known for its dependability and attention to details.

St. Charles' experienced men and modern facilities for manufacture are available to you . . . with competent help on casework applications and planning. Your request will bring a prompt response.

This complete catalog, "St. Charles Hospital Casework," is available at request on your letterhead.



StC

casework • sinks and counters • special purpose units

ST. CHARLES MANUFACTURING COMPANY, DEPT. ARH-9, ST. CHARLES, ILLINOIS

So easy on the eyes of



This handsome new bank and office building in Fort Worth, Texas, houses the Mutual Savings & Loan Association. Architect: Preston M. Geren. Consulting Engineer: Yandell, Cowan & Love Engineering Co.

Texas...

Curtis Visioneers provided high levels of illumination, Eye-Comfort diffused lighting . . . blending with modern low-ceiling architectural design . . . at Fort Worth savings and loan company

An office where banking transactions are made has a special need for lighting that assures visual acuity. Fort Worth's Mutual Savings and Loan Association was faced with this problem: how to achieve modern low-ceiling construction, yet obtain high levels of illumination without objectionable shadows or glare. Solution: Drawing from a wealth of experience, Curtis created a continuous luminous ceiling through use of Strato-Lux. Result: a lighting system compatible with the modernistic low-ceiling design of the building —that provided high intensity lighting with even-panel illumination . . . yet delivered low brightness quality. No glare, no distracting shadows or eye strain. Using standard products, with slight modifications to satisfy your job requirements, when necessary, Curtis visioneers can assist you, whatever your commercial lighting needs. So write today for the name and address of the Curtis Visioneer in the principal city nearest you. Curtis Lighting, Inc., 6135 West 65th St., Chicago 38, Ill. In Canada: 195 Wicksteed Ave., Toronto 17 Canada.



Curtis Strato-Lux provides high levels of glare-free illumination to promote efficiency and serenity. Exceptionally low ceiling brightness is achieved through use of #6025 Holophane acrylic plastic Controlens.



Even with Strato-Lux directly overhead, there are no bright spots, no reflections, in critical viewing areas. Acrylic plastic panels never discolor, can be slipped out one at a time and dipped in detergent for cleaning.

CURTIS

Visioneers in Planned Lighting



This is a city . . .



. . . after a power failure

Exide emergency lighting system keeps lights on

See what a difference an Exide Emergency Lighting System can make in a building. If regular electric power fails, it takes over the lighting load automatically and instantaneously. No loss of light, even momentarily. Prevents accidents, panic, damage, theft. Low-cost protection for modern buildings. Get full details. Write Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.



Emergency power source. Powerful Exide Batteries can handle lighting loads for entire buildings. Long lasting—as much as 25 years in many installations.

Exide®

Office Literature

continued from page 308

Bent Tube Boilers

Bulletin VF-VS 2 presents diagrams of, and data on, typical installations of Vogt two-drum type bent tube steam boilers for power, processing and heating. 24 pp. *Henry Vogt Machine Co., Inc., P. O. Box 1918, Louisville 1, Ky.*

Universal Registers and Grilles

(A.I.A. 30-J) Manual No. 39 gives complete selection, engineering and cost data on Universal's *Stream-Flow* line of registers and grilles. 24 pp. *Universal Diffuser Corp., 38 Marbledale Rd., Tuckahoe, N. Y.*

The Modern Stone Age is Here

Pictorially reviews the use of stone from antiquity to the present, and depicts every type of quarried stone with suggested uses and patterns. *Building Stone Institute, 420 Lexington Ave., New York 17, N. Y.*

Glas-Wich—The Most Beautiful Glass . . . in the World

(A.I.A. 26-A-5) Describes, and illustrates in full color, the *Glass-Wich* line of decorative laminated safety glass. 8 pp. *Dearborn Glass Co., 6600 S. Harlem Ave., Bedford Park, Ill.*

Planned Lighting . . . for Better Living

Features illustrations, descriptive information and specifications for the *Globelight* line of residential lighting fixtures *Globe Lighting Products, 16 East 40th St., New York, N. Y.*

4-D Wrought Iron . . . A New Dimension in Corrosion Control

(A.I.A. 15-D) Describes *4-D* wrought iron, its increased corrosion resistance and its applications. Results of comparative in-service and laboratory tests are documented. 8 pp. *A. M. Byers Co., P. O. Box 1076, Pittsburgh 30, Pa.**

Ventilating Hoods and Ventilators

Bulletin 620-P describes and gives specifications, selection and installation data on *Trade-Wind* ventilating hoods, ventilators and electric wall insert heaters. 12 pp. *Trade-Wind Motorfans, Inc., 7755 Paramount Blvd., Rivera, Calif.**

Mobile Classroom Furniture

Describes, illustrates and gives specification information on *Fleetwood* line of mobile classroom cabinets. 46 pp. *Fleetwood Furniture Co., Zeeland, Mich.*

* *Additional product information in Sweet's Architectural File, 1958*

more literature on page 316



TWO EXTRA CLASSROOMS AT NO EXTRA COST!

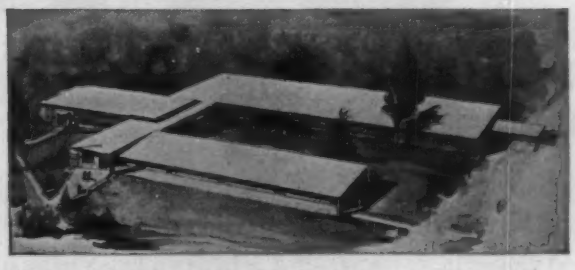
Stran-Steel Joists Effect Important Savings

Over two miles of Stran-Steel nailable joists were recently used in building the Devine Elementary School at Devine, Texas. They contributed to construction economies that, according to the architect, Adams and Adams, resulted in two extra classrooms at no extra cost.

Construction of the Devine school demonstrates again that Stran-Steel nailable joists simplify the application of collateral materials. In this case, roofing was nailed directly to the joists. Architects have also found that Stran-Steel joists and beams fit closely, reducing ceiling depth, and eliminating need for boxed beams or dropped ceilings.

For permanent and economical framing that is lightweight, firesafe and nailable, specify Stran-Steel joists. Better yet, find out about the *complete* Stran-Steel building system that gives you low-cost flat ceilings and nailable steel framing in any type of commercial or industrial construction. Mail the coupon for information or contact your nearest Stran-Steel dealer. He's listed in the Yellow Pages under *Steel*.

Dept. 23-24
STRAN-STEEL CORPORATION
Detroit 29, Michigan • Division of
NATIONAL STEEL CORPORATION



Devine Elementary School, Devine, Texas
Architect: Adams & Adams, A.I.A., San Antonio, Texas
General Contractor: William Matera, San Antonio, Texas

Stran-Steel Architectural Products Mean Construction Savings For You



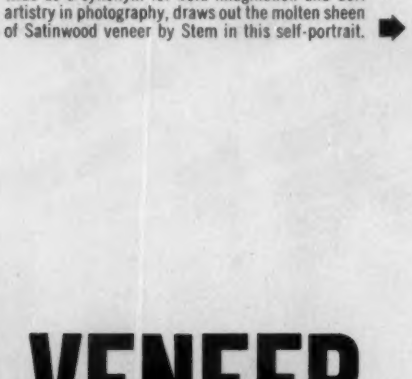
For More Information, Use This Coupon

Stran-Steel Corporation, Dept. 23-24
Detroit 29, Michigan

☐ Please send me the Structural Systems Catalog.
☐ Please have your representative contact me.

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____

Prestige Photographers—One of a series. At the right, Ralph Cowan, whose name is known nationwide as a synonym for bold imagination and deft artistry in photography, draws out the molten sheen of Satinwood veneer by Stem in this self-portrait.



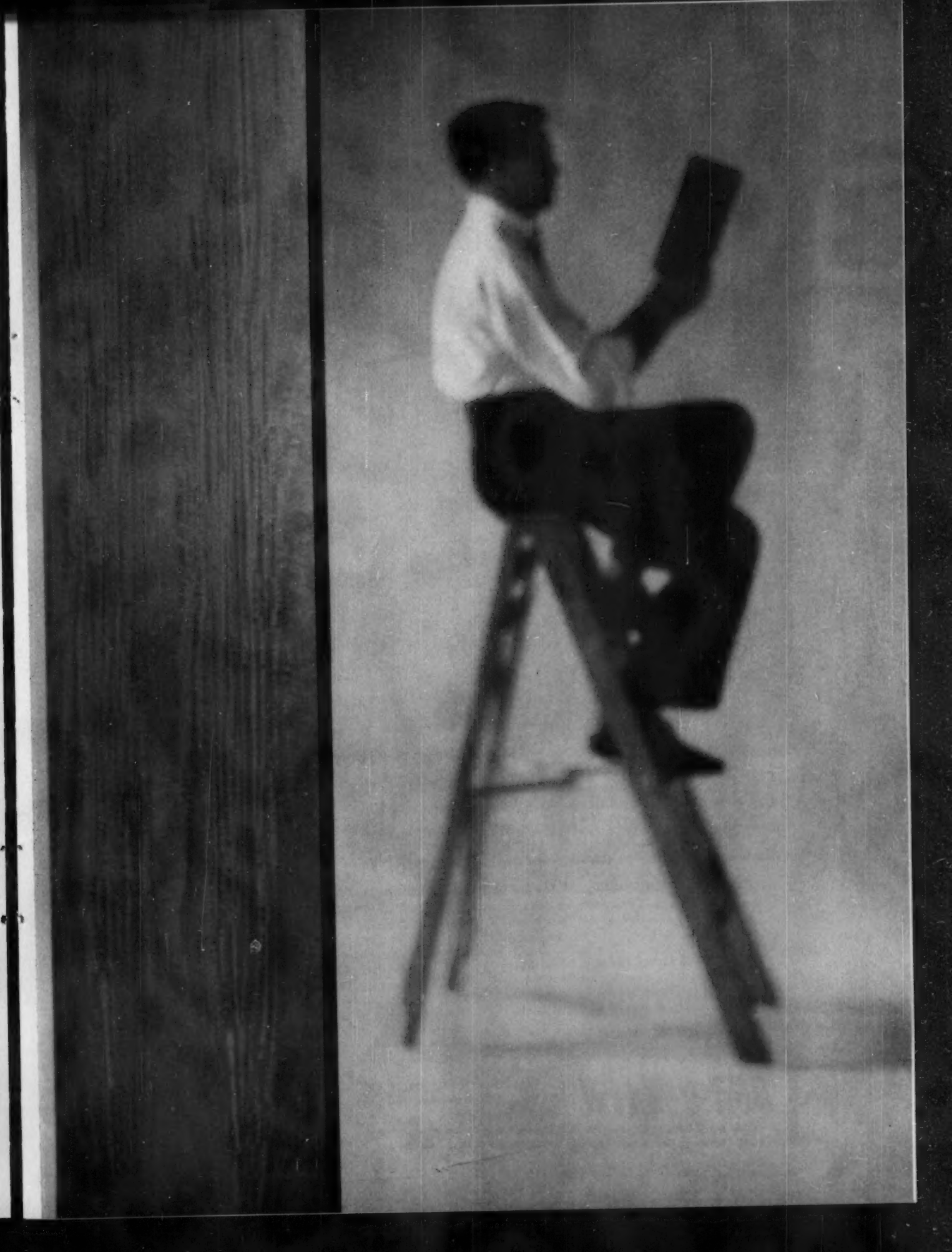
PRESTIGE VENEER ...THE GOLDEN ELEGANCE OF SATINWOOD

Capture the exotic subtlety of Satinwood fully by specifying STEM veneer from log samples

From the far reaches of the world, the island of Ceylon, famous for its subtle teas, Stem brings you Satinwood, a golden-sheened wood with delicate, intricately figured grain. Satinwood glories in its name, for it achieves a finish more lustrous, more brilliant than any other wood. On any project requiring 1,000 square feet or more of fine wood wall paneling, Stem affords the important and additional means of capturing fully this golden elegance by specifying from actual log samples the veneer of your choice. You can be sure then of just the right color gradation, just the right configuration of grain, the perfect background. Stem offers the *world's largest collection* of architectural flitches (a log or part of a log cut into veneers) from which you can choose Satinwood and many other fine, rare architectural veneers. If you identify in your original specifications the selected flitches by wood specie and flitch number, only then can you be comfortable in your confidence that the finished installation will achieve the full elegance and subtlety to which you are entitled when you select a decorative background with exotic traditions. Don't compromise for less.

CHESTER B. STEM, INC., NEW ALBANY, INDIANA

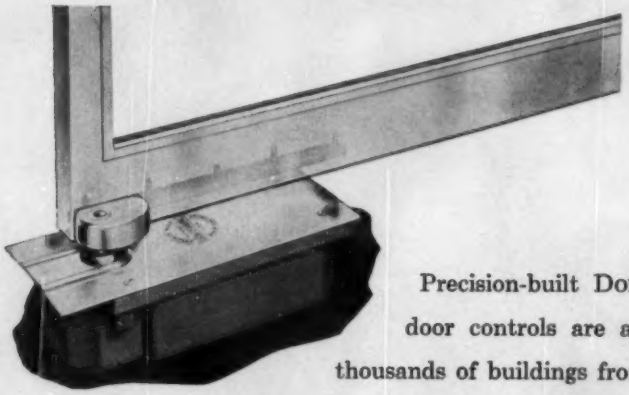
RARE WOODS FROM STEM



Positive Door Control is a MUST where there's heavy traffic



use DOR-O-MATIC® CONCEALED IN FLOOR Manual Door Controls



Precision-built DOR-O-MATIC door controls are at work in thousands of buildings from coast to coast . . . providing vital positive door control under even the heaviest traffic conditions. Designed for long service and complete adaptability to contemporary design and function, there are 31 models to choose from . . . one for every type door in any kind of building. Write for detailed information.

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CANADA: Dor-O-Matic of Canada, Ltd., 550 Hopewell Avenue, Toronto 10, Ontario
EXPORT: Consultants International, Apartado 21397, Mexico 7, D. F., Mexico

Office Literature

continued from page 312

Darkroom Design and Construction
Offers comprehensive information on planning photographic facilities, with suggested layouts to fit specific work and space requirements. 64 pp. 50¢. *Eastman Kodak Co., Rochester 4, N. Y.*

Low Voltage Switching Systems
Presents data on designing, specifying and installing low voltage switching systems; describes complete line of *Touch-Plate* equipment; and shows a suggested layout for a master-controlled residential system. 18 pp. *Touch-Plate Mfg. Corp., P. O. Box 1970, Long Beach, Calif.*

Noise Control for Bowling Lanes
(A.I.A. 39-B) Discusses noise problems characteristic of bowling lanes, and offers suggestions for their solution. Installation details for *Reynocoustic* treatment of bowling lanes are included. *Reynolds Metals Co., Richmond 18, Va.**

Central Station Weathermakers
Catalog 39ACW-55 presents engineering and selection data on *Weathermaker* central station air conditioning units for conventional and multi-zone applications. Included are product features, mechanical and guide specifications, and performance curves and rating tables for hot water and steam coils. 72 pp. *Carrier Corp., Carrier Parkway, Syracuse, N. Y.**

Curtain Wall Systems
Gives construction details and specifications for *Bayley* line of aluminum or steel curtain wall systems and insulated panels. 16 pp. *The William Bayley Co., Springfield, Ohio.**

Herman Nelson Unit Ventilators
Bulletin 600-A1 gives selection, engineering, specification and wiring data on *Herman Nelson Draft/Stop* unit ventilators for schools. 28 pp. *Dept. PD, American Air Filter Co., 215 Central Ave., Louisville 8, Ky.*

Take a Peek into Tomorrow
. . . *With Hewitt-Robins* Eight page booklet describes three types of passenger conveyors and gives specifications and schematic drawings for each. *Hewitt-Robins, Inc., 666 Glenbrook Rd., Stamford, Conn.*

Literature Requested
Mr. Borg R. Nielsen, Architectural Engineering Dept., Minnesota Mining & Manufacturing Co., 400 McKnight Rd., St. Paul 6, Minn.

**Additional product information in Sweet's Architectural File, 1958*



Now you can use FOAMGLAS® on roofs requiring less than 2" of insulation. This unique, multi-benefit insulation is available in a thickness of 1¾". And this new thickness makes possible a new 25% lower price.

With the new 1¾" FOAMGLAS, you enjoy the same insulating efficiency at the same cost per square foot installed as with any other insulation board, including wood fiber. One reason is the low cost of the new thickness. Another is that FOAMGLAS does not require the vapor barrier recommended with other insulating boards. The closed cells of FOAMGLAS form a natural vapor barrier which maintains original thermal efficiency.

And, the new 1¾" thickness retains all of the many extra benefits of FOAMGLAS roof insulation. It is strong enough to take all roof and traffic loads during and after installation, but it is lightweight for easier handling. It can't burn. It is easy to cut and fit . . . and a new quick opening carton eliminates bothersome paper separators.

Write today for complete information on this new roof insulation development by Pittsburgh Corning Corporation, Dept. B-98, One Gateway Center, Pittsburgh 22, Pennsylvania.

PC Glass Blocks are another outstanding building product of Pittsburgh Corning Corporation.

PITTSBURGH PC CORNING

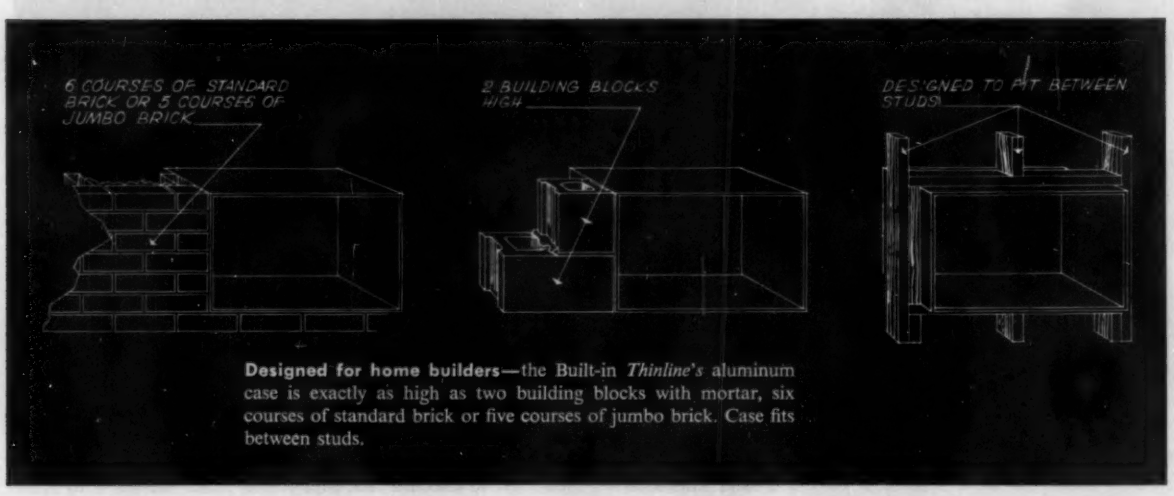
Air Conditioning Designed for Builders... New General Electric



INSIDE, the new General Electric Built-in *Thinline* is covered with a panel that can be painted or papered to match interior decoration. It *blends* in with room décor! Controls are hidden away from view, yet are easy to reach when needed.

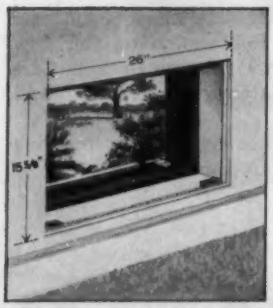


OUTSIDE, the Built-in *Thinline* has a "no see through" aluminum grille. It can be painted to match exterior. From street, it has a neat, Built-in look.



Designed for home builders—the Built-in *Thinline's* aluminum case is exactly as high as two building blocks with mortar, six courses of standard brick or five courses of jumbo brick. Case fits between studs.

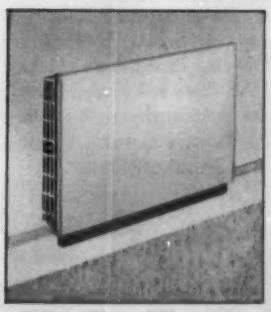
See how easy it is to install the new General Electric Built-in Thinline:



Your workmen install case during construction. Inside and outside panels protect the case until building is finished.



Slide the unit into the case later. It's compact and easy to handle, thanks to exclusive Spine-Fin cooling system and new compressor.



Add the inside panel, connect it and the new Built-in *Thinline* is ready to run. So neat you'd hardly notice it's in the room.



Outside louvers can be painted to match exterior. Makes the new General Electric Built-in *Thinline* blend with the finished house.

to cut on-site costs, save space!

Built-in Thinline

Cuts on-site costs because it needs no special ductwork or plumbing. Takes up no space because it's part of the wall. Lets you air condition zone by zone—as little or as much of the house as you want. General Electric's new Built-in Thinline Air Conditioner blends gracefully with any home design—inside and out.

DON'T DECIDE on any air conditioning system for the homes you build until you've seen the newest system of them all—the new General Electric Built-in *Thinline*. Consider its many advantages . . .

Cuts on-site costs—You don't need a skilled workman to install it. You not only save those hours of skilled and high-paid work by specialists, but you also save the cost of duct and plumbing materials. Its aluminum case is *exactly* as high as two building blocks with mortar, six courses of standard brick or five courses of jumbo brick.

Takes up no space because it's *part of the wall!* The louvered grille can be painted to match the house exterior. And you hardly know it's inside the room, because the inside panel can be painted or papered to match the décor. It fits almost flush inside and out.

Flexible—you can air condition zone by zone—because the new General Electric Built-in *Thinline* packs up to 10,000 BTU's*—more than enough to cool a room in an average-sized house. A few can often take care of a whole house!

So you can air condition as little or as much as you want—and still have the sales appeal of air conditioning.

Economical—not only in labor and materials, but also in initial cost, too! And the new General Electric Built-in *Thinline* system costs less than most central systems.

Order now! Construction cases are ready for shipment right now. Your General Electric distributor has full details on the one air conditioning system designed specifically to answer builder needs.

General Electric Co., Appliance Park, Louisville 1, Kentucky.

*Cooling capacities are tested and rated in compliance with ARI Standard 110-58 and are stated in British Thermal Units.

BUY NOW FOR EXTRA VALUES!

Progress Is Our Most Important Product

GENERAL ELECTRIC

Send for FREE BOOKLET



Get the *whole* story. How you can *save* air conditioning dollars—and still give your home buyers the *best* in home cooling.

See your General Electric distributor, or SEND TODAY for your FREE booklet *"Building and Air Conditioning with General Electric"* which fully explains General Electric's *modern* concept for home air conditioning.

USE THIS HANDY COUPON TODAY!

General Electric Company
Dept. 4D, Appliance Park
Louisville 1, Kentucky

Please send me my free copy of "Building and Air Conditioning with General Electric." ☐

Also send name of local distributor. ☐

YOUR NAME _____

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STREET _____

CITY _____ ZONE _____

STATE _____

BUILDER _____ ☐

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Permalite insulating concrete (1:6 mix Portland cement and Permalite expanded perlite aggregate), 2" thick, weighs only 4½ lbs./sq. ft.—about 4 lbs. less than other commonly-used poured-in-place roof deck materials.

With such light weight you can usually specify a size smaller joist, weighing 2 lbs. less per lineal foot... 50¢ a foot saving, with a steel-in-place cost of 25¢ lb. And you have more than adequate compressive strength—180 psi.

As for insulation, 1:6 mix Permalite concrete has a "k" of 0.58, and a "U" value of about .20 for a 2" thickness with built-up roof over permanent forms such as corrugated steel and paper-backed wire mesh.

Other advantages: Firesafe. Can't rot. Vermin-proof; termite-proof. Handles and places like any ordinary concrete. Easily sloped to drain.

No other roof deck material gives you so much insulation, with so much strength, at such light weight!

See your Sweets File, or write for complete information

Permalite | THE LARGEST SELLING PERLITE AGGREGATE IN THE WORLD

Perlite Department, Great Lakes Carbon Corp., 612 S. Flower St., Los Angeles 17, Calif.

Permalite aggregate is produced by licensed franchisees from perlite ore mined by Great Lakes Carbon Corporation.

Composite Construction

(Continued from page 246)

the ACI-ASCE joint committee is exploring the feasibility of designing the composite beam as though shores were to be used (i.e. on the assumption that all loads will be resisted by the full composite section)—and then omitting the temporary supports.

In all composite design, the assumption that there is no slip between slab and beam is implicit. While bond between the concrete and steel may provide some composite action, its extent has not been accurately determined. Canadian practice is to use an assigned value for bond and to design connectors only for the shear in excess of that value, and the Joint Committee on Composite Construction is currently attempting to assemble data on the actual strength of bond which would permit a reasonable allowance for it in the recommended practice.

However, at present, a composite beam is assumed to be only as good as the connectors which transfer the horizontal shear and tie down the slab. In theory, these connectors could take any shape that met the two basic requirements. In practice, only three types of mechanical shear connectors have been used to any great extent: the channel connector, which is a rolled channel with one flange welded to the beam; the spiral connector, which is a round bar shaped into a helix and welded at every point where it touches the beam; and the granular-flux-filled welded stud, which is a short piece of round steel bar with one end welded to the beam so that its upset head provides the necessary tie down.

Of these, the stud connector is the most recently introduced, and, in many ways, the most practical. Its principal advantage over other types of connectors is that the studs can be quickly and easily attached to the steel beam by semi-automatic arc welding, either in the shop or on the job. Because they are relatively small, two or more are usually required for the same transverse cross section and their layout can be varied slightly to facilitate placing of the slab reinforcement. Their shape also eases the difficulty of properly compacting concrete around the connector. Although the welded studs have not yet been in use long enough for comparative cost data to have been established, the general concensus of opinion seems to be that they are now competitive with other types of connectors and may become cheaper as contractors become more familiar with them.

ANEMOSTAT reports on All-Air High Velocity Systems



Selection Manual No. 60 will be sent to you promptly on request.

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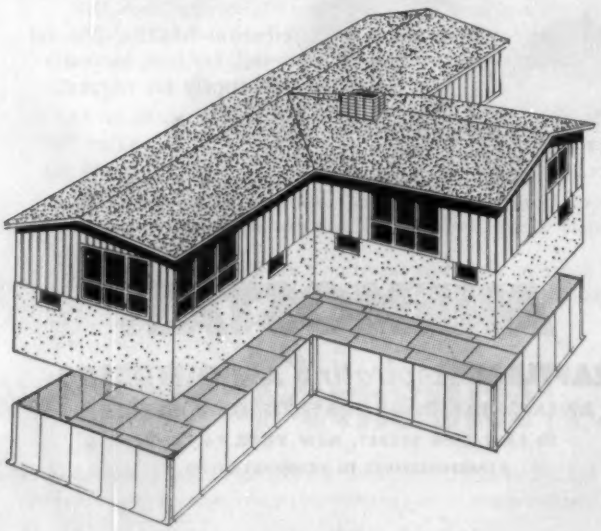
...so why substitute it for

COMPARE *PM WITH ANY OTHER TYPE OF VAPOR SEAL ON THE MARKET!

COMPARE the permeance ratings . . . for on this point alone, "PREMOULDED MEMBRANE" stands head and shoulders above all other, so called, vapor barriers on the market. In fact, as you will see by the chart below "PREMOULDED MEMBRANE" is over 16 times more impermeable than the next ranking material.

MATERIAL	WATER VAPOR TRANSMISSION (in *Perms)	
	LOW	HIGH
Sealtight "PREMOULDED MEMBRANE"	.0066	.0066
Polyethylene Film (.004 in. thick)	.097	.108
55-pounds roll roofing	.030	.081
Duplex paper (coated both sides—reflectors material, reinforced)	.304	.347

*Perms—grains per square foot per hour per inch of mercury difference in vapor pressure at standard test condition.

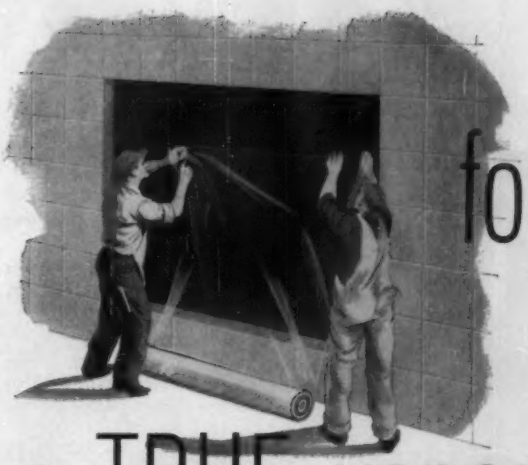


COMPARE the strength . . . "PREMOULDED MEMBRANE" is strong enough to maintain its permeance rating after it has been subjected to the pouring of aggregate, trundling of wheelbarrows and installation foot traffic. Resists rupturing and tearing. How many other materials will perform like this under the above circumstances?

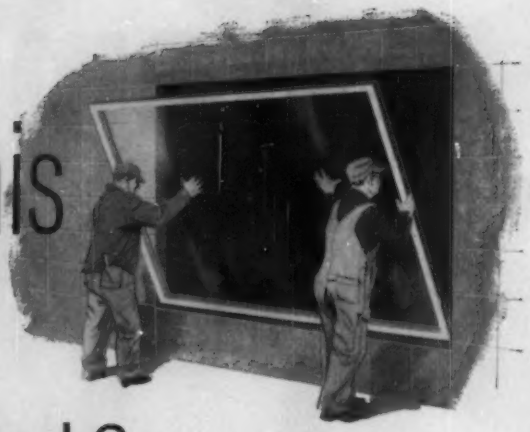
COMPARE the ease and speed of providing a permanent installation . . . "PM" may be laid directly over the tamped grade or fill . . . joints are then efficiently sealed with Sealtight Catalytic (non-setting) Asphalt, thereby providing a monolithic vapor seal with mechanically sealed joints, that will expand and contract with the concrete slab above without breaking the bond.

*PM PROVIDES A WATERPROOF SHIELD THAT PERMANENTLY PROTECTS YOUR STRUCTURE FROM MOISTURE MIGRATION

Sealtight "Premoulded Membrane" provides a positive, permanent protection against the ravages of destructive moisture in all residential, commercial and institutional buildings. Ideal for all types of construction . . . for slab-on grade construction the installation of "PM" completely isolates slab from any moisture originating in the site . . . the installation of "PM" in Crawl-space construction removes all danger of moisture migration, condensation and oxidation of metal installations in the crawl-space area . . . eliminates need for ventilation . . . "PM" properly applied to the exterior of basement walls and beneath the floor slab insures a warm, dry, livable basement. Prevents any migration of vapor or capillary movement of free water.



for this



a TRUE vapor seal?

It is fortunate that within the last decade the building industry has recognized the need to install a vapor barrier between the site and structure . . . unfortunately, the building industry has been guilty of the promiscuous use of permeable materials under the guise of vapor barriers. It is a known fact that asphalt saturated felts and building papers, duplex papers and plastic films are all highly permeable and should not be considered as effective vapor barriers.

You do not use a polyethylene film to replace glass for many reasons . . . most important is the fact that it would not completely eliminate weather penetration and is easily ruptured. It is basically these very same reasons that make plastic films and other permeable materials unsuitable as a vapor barrier . . . and, even more important, unlike a window, a vapor seal is installed *permanently* . . . it cannot be replaced at a later date. A vapor seal must be impermeable, monolithic, without voids, open or lapped seams and strong enough to provide a permanent installation without rupturing under installation handling and foot traffic, the trundling of wheelbarrows and pouring of aggregate.

We sincerely advise and invite your comparison of "PM" against all other "so called" vapor barrier products on the market. "PM," the industry's only true, impermeable vapor seal, is actually the most economical available when you consider the reduced maintenance and redecorating costs realized through the complete elimination of moisture migration into the structure.

Premoulded Membrane TRADEMARK . . . the industry's only TRUE vapor seal!

Write today for complete information . . . request your free copy of "Design Techniques"—a technical manual that provides in the architects and engineers own language factual proof of the effectiveness of using impermeable materials in eliminating moisture migration. For a complete set of structural recommendations on the applications and installation of "Premoulded Membrane," request a set of our "PM" Tech-Tips.

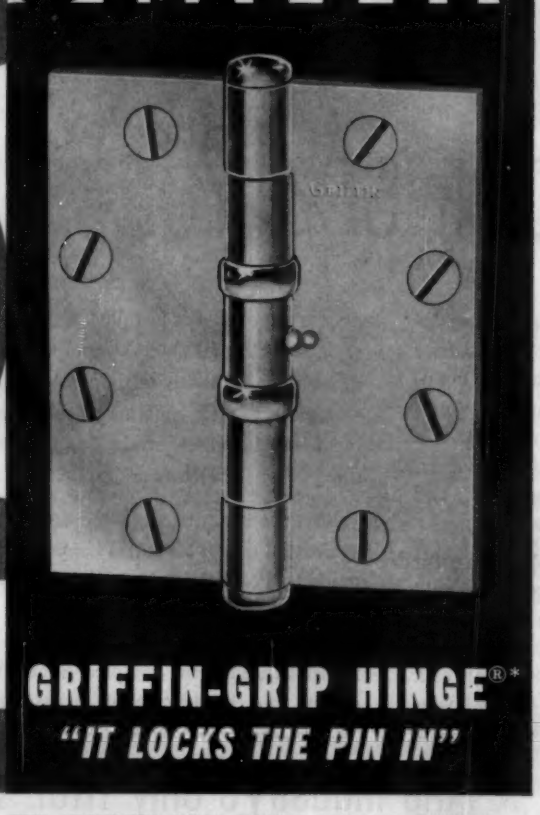
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- JOINT SEALING COMPOUNDS
- EXPANSION JOINTS of all types including asphalt, fibre, cork, and sponge rubber
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GRIFFIN-GRIP HINGE®*
"IT LOCKS THE PIN IN"

THE SECURITY HINGE THAT'S EASY TO INSTALL

When the Griffin-Grip Hinge is closed, the hardened steel ball is locked into the groove in the hinge pin. Makes it impossible to remove the pin.

EASY TO INSTALL—No more unscrewing and screwing easy-to-lose set screws. Doors are hung faster than any standard non-rising pin hinge when you specify new Griffin-Grip Hinge.

NEW Griffin-Grip is available on all ball-bearing and all template hinges 4" and larger in all standard hardware finishes. Specify GG for the impregnable Griffin-Grip hinge 'it locks the pin in.'

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*patented

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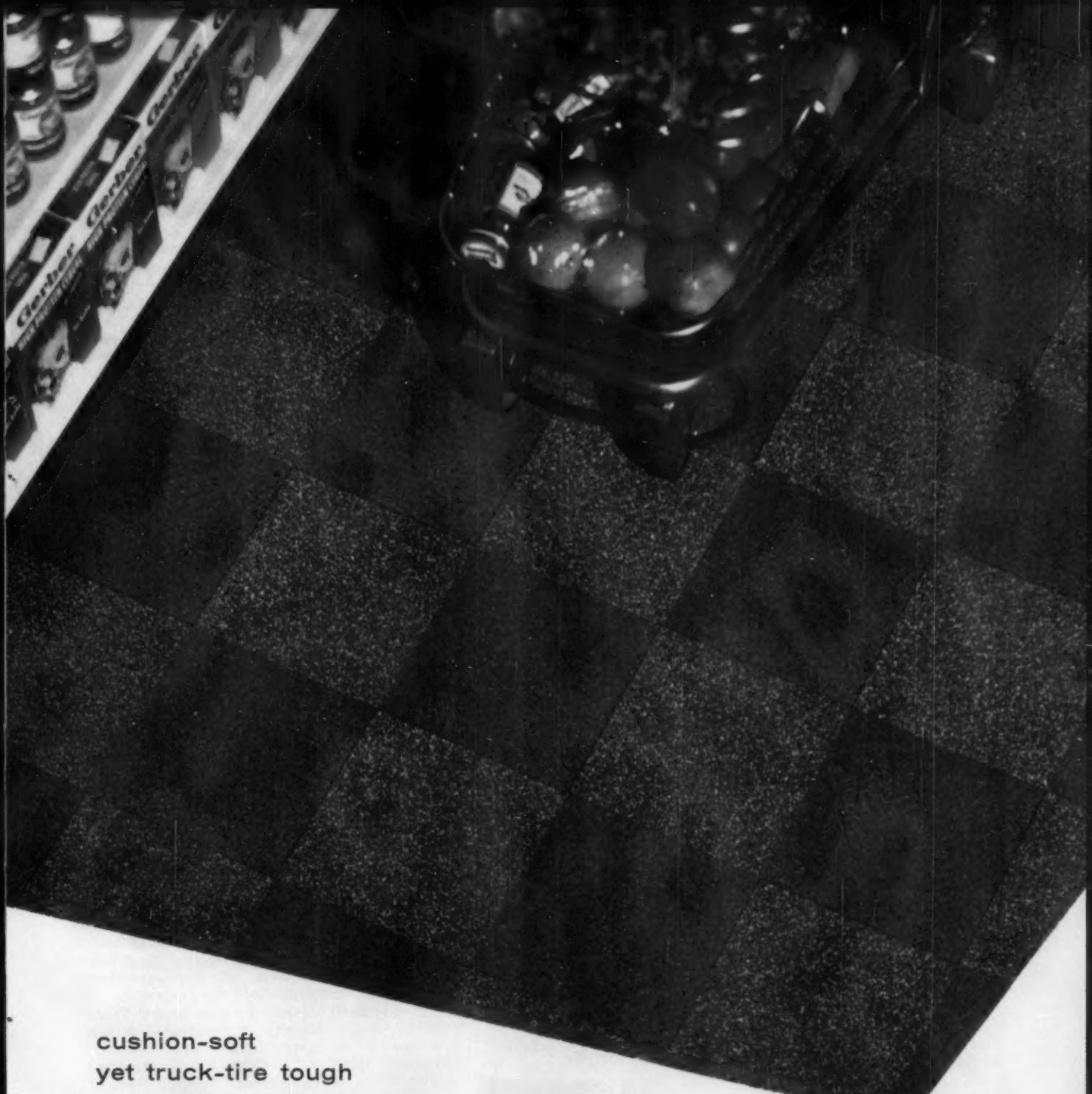
On the Calendar

September

1-14 Second International Exhibition of the Peaceful Uses of Atomic Energy—Palais des Expositions, Geneva.
4-5 International Conference on Air Pollution—Hotel Statler, New York City.
6-14 National Home Week
15-19 13th annual Instrument Automation Conference and Exhibit—Convention Hall, Philadelphia.
17-18 Building Research Institute Conference on Installation and Maintenance of Resilient Smooth-Surface Flooring—Sheraton-Park Hotel, Washington
21-24 National Planning Conference of Community Planning Association of Canada—King Edward Sheraton Hotel, Toronto
22-25 Annual meeting, Institute of Traffic Engineers—McAllister and Columbus Hotels, Miami
22-26 40th National Recreation Congress, sponsored by National Recreation Association and allied organizations—Hotel Ambassador, Atlantic City, N. J.
25-27 Annual meeting, Porcelain Enamel Institute—The Greenbrier, White Sulphur Springs, W. Va.
26-27 Conference on industrial real estate market, sponsored by Society of Industrial Realtors in cooperation with Wharton School of Finance and Commerce, University of Pennsylvania—Philadelphia.

October

2-4 North Central A.I.A. Regional Conference—St. Paul, Minn.
2-4 Annual convention, Structural Engineers of California—Ahwahnee Hotel, Yosemite National Park, Calif.
8-10 Gulf States A.I.A. Regional Conference—Biloxi, Miss.
9-10 Ninth Annual Noise Abatement Symposium, sponsored by Armour Research Foundation of Illinois Institute of Technology in conjunction with Acoustical Society of America, American Society of Safety Engineers, National Noise Abatement Council, American Society of Planning Officials, American Industrial



cushion-soft
yet truck-tire tough

new Tuflex® SUPER-RESILIENT RUBBER FLOORING

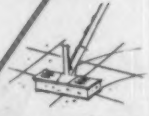
There is no other rubber flooring presently being manufactured that is anything like New Tuflex. Underfoot it feels like carpeting . . . so cushion-y even fallen articles seldom break. Yet Tuflex has such exceptional resistance to indentation and perforation, it's recommended, in proper gauges, for golf club locker rooms where punishment to floors is excessive. Tuflex is truly resilient . . . rebounds fully even from great weight or sharp impact. Tested under the most rugged conditions, new Tuflex has proved itself to be the most durable, most comfortable flooring ever produced.

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GENERAL® PLASTICS
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cleans easily


resists stains


resists perforation

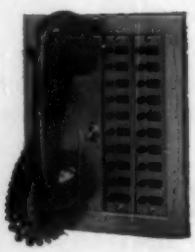

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shines . . .

The busy nurse . . . giving constant dedicated service . . . finds her tasks simpler, easier with the Couch Audio-Visual Nurses Call System.

New . . . initiate calls by the merest touch of a finger on a button . . . no dial-to-call. Fully automatic . . . pick up handset to answer . . . no press-to-talk . . . initiating switch in patient's room resets automatically as call is answered. The priority call . . . answered at once without disconnecting others.

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The Record Reports

Hygiene Association, Acoustical Materials Association, and *Noise Control* magazine—Chicago

9-11 13th Annual Forum, Pennsylvania Society of Architects—Galen Hall, Wernersville, Pa.

12-16 Annual conference, National Association of Housing and Redevelopment Officials—San Francisco

12-16 60th annual conference and exhibit, American Institute of Park Executives and American Association of Zoological Parks and Aquariums—Jung Hotel, New Orleans

13-17 National convention (third of three), American Society of Civil Engineers and second annual Civil Engineering Show—New York City

14-16 Women's Conference on Housing, sponsored by National Association of Home Builders and United Industry Committee for Housing—National Housing Center, Washington

15-18 New York State Association of Architects Convention (16-18) and Regional Conference, New York District A.I.A. (15)—Powers Hotel, Rochester

20-23 10th Mental Hospital Institute—Hotel Muehlebach, Kansas City

22-24 25th annual convention, Architects Society of Ohio—Sheraton-Gibson Hotel, Cincinnati

23-25 Fall meeting, National Society of Professional Engineers—St. Francis Hotel, San Francisco

25-29 Annual meeting, American Institute of Planners—New York City

29-31 Annual convention, Texas Society of Architects—Hilton Hotel, San Antonio

30ff A.I.A. Central States Regional Conference (through Nov. 1)—Kansas City

31ff Annual meeting, National Trust for Historic Preservation (through Nov. 2)—New Orleans

November

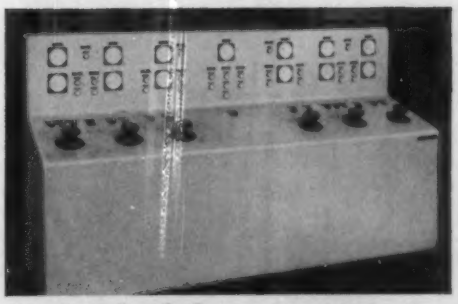
3-7 43rd annual National Hotel Exposition—The Coliseum, New York City

17-21 Eighth National Plastics Exposition, sponsored by the Society of the Plastics Industry—International Amphitheater, Chicago

18-20 Ninth national conference on

NOW... color and decoration uniform all through





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This great new tile is made on an entirely new, ultra-modern production line controlled *throughout* by a tremendous electronic masterboard especially designed for Congoleum-Nairn by GE automation experts. This means such absolutely accurate control that an entirely new standard of precision and uniformity is achieved in color, size, texture, gauge and strength . . . with maximum dirt resistance and gloss.

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SPECIFICATIONS

ASPHALT—Size: 9" x 9" and 12" x 12"—Gauges: 1/8" and 3/16"—Colors: 17
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Congoleum-Nairn ends pattern wear in Vinyl Asbestos and Asphalt Tile flooring!

The tile photographed above reveals, by a special test, the most important improvement in this type of flooring since the invention of vinyl asbestos itself. A portion has been "peeled" up to show the center, proving that THE STRIATION IS JUST AS STRONG THROUGHOUT (RIGHT TO THE BOTTOM) AS AT THE TOP!

This means that when you install Congoleum-Nairn's sensational new Asphalt and Vinylbest Tile, with FEATHERVEINING Thru and Thru, your floor will never develop any areas where the pattern has been worn off—as in traffic lanes and near doors—nor show pattern differences from area to area.

No matter how far you wear down this new Congoleum-Nairn tile, the intensity and distribution of the pattern never varies—can't be worn off!

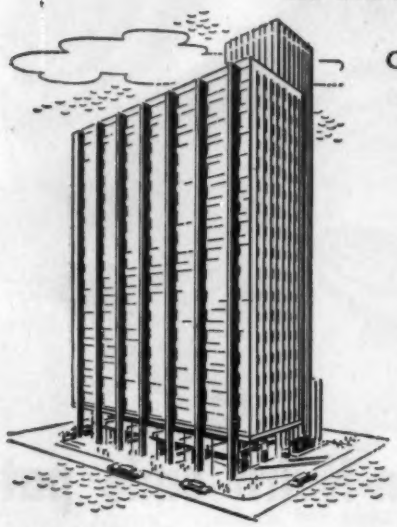
And this is all guaranteed by the famous Congoleum-Nairn warranty—"Satisfaction guaranteed or your money back."

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Write Architect's Service Bureau, Congoleum-Nairn Inc., Kearny, N. J. for technical data and samples of Congoleum-Nairn Asphalt and Vinylbest Tile with FEATHERVEINING.

Custom-Designed

modular acoustical ceiling . . and partition installation . . in new Inland Steel Building

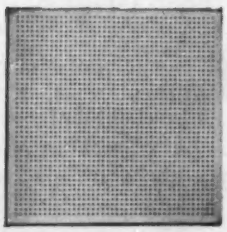


Chicago's newest skyscraper has a unique acoustical ceiling that provides maximum layout flexibility in its large open floor areas.

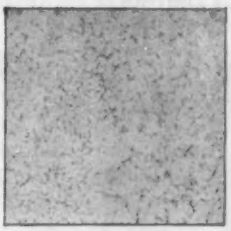
The ceiling is made up of Acousti-Celotex 12″ x 24″ Acousteel metal pan assemblies, in combination with 2″ wide grid panels spaced 62″ o.c. in both directions. Partitions can be placed anywhere along the grid panels, in either direction, with studs fitting up into the 2″ x 2″ square openings formed at every grid intersection. When new office layouts require changes in partitioning, the removable 2″ x 2″ corner blocks are taken out to allow insertion of studs.

Light fixtures and air diffusers (which are Acousteel pans with sound absorbing elements removed) snap into the same T-bars as the standard Acousteel units, making an integrated, dead-level ceiling that gives top performance for owners and tenants.

This building is another example of the results that can come from careful ceiling planning. Take advantage of the knowledge your *Acousti-Celotex distributor* has developed in this relatively new field of integrated, multi-function ceiling construction. He has the acoustical products, suspension systems and experience to help you put ceilings to work in new ways to meet your design requirements.



CAVITY TILE**



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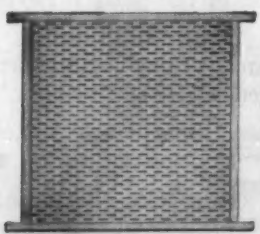
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Sound Conditioning

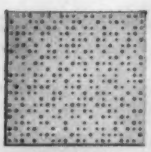
Products to Meet Every Sound Conditioning Problem . . . Every Building Code

The Celotex Corporation, 120 S. La Salle St., Chicago 3, Ill.

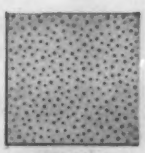
In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec



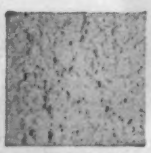
STEELACOUSTIC® PANELS



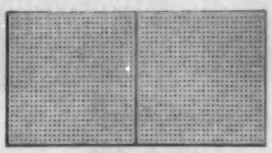
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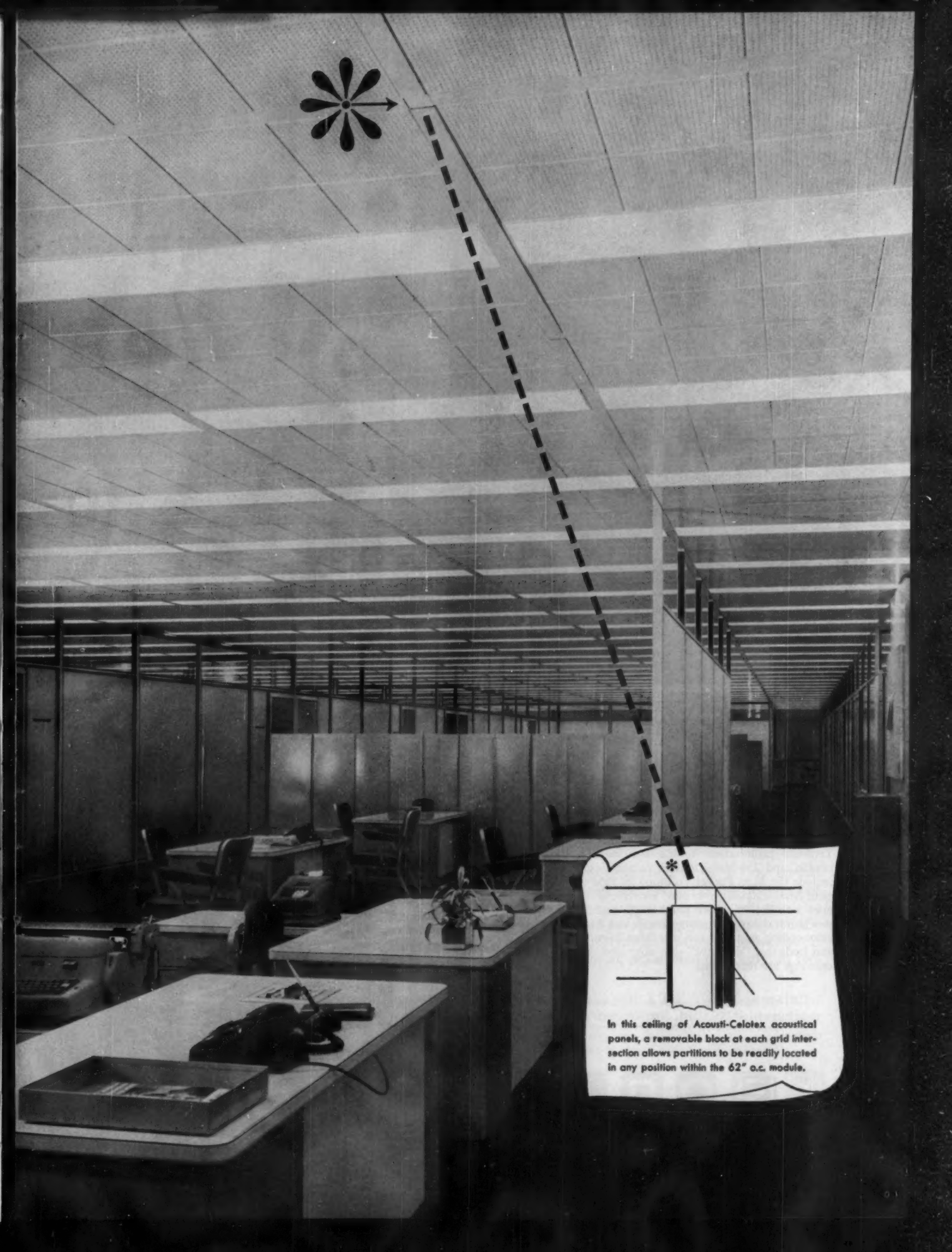
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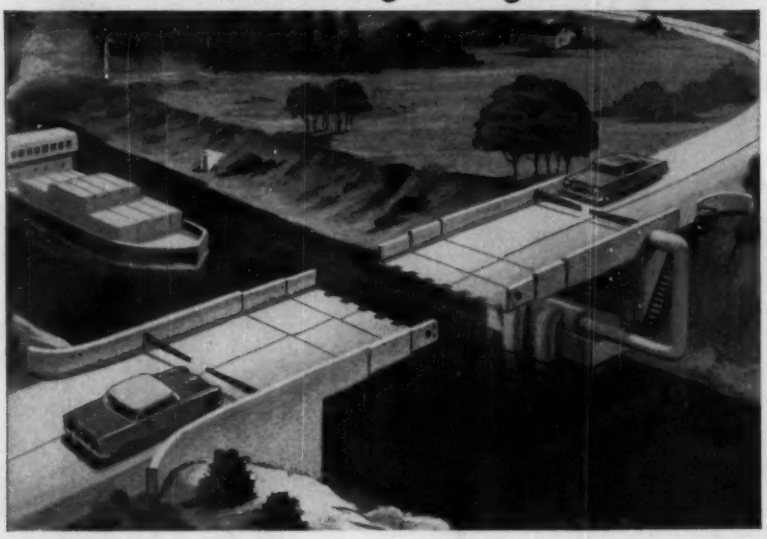
*U. S. PAT. NO. D-168,753

**U. S. PAT. NO. 2,838,806 ‡TRADEMARK



In this ceiling of Acousti-Celotex acoustical panels, a removable block at each grid intersection allows partitions to be readily located in any position within the 62" o.c. module.

MARS outstanding design **SERIES**



automated bridge

The bridge of tomorrow will be self-activating, equipped with electric-eye controls and an anti-freeze system. No overhead structures will obstruct the view, or interfere with radio reception, according to Robert J. Companik of Chicago.

In his design, the bridge is operated by pressure pumps that draw water from the canal into the hollow structure and hold it shut by the weight of the water. To allow boats to pass, pressure is released, counterweights pull the sections together, and the bridge opens. An electric eye down the canal activates the opening and the bridge does not close until an eye on the other side is passed. Heating units keep both eyes free from snow and ice, and a brine system keeps the bridge in operation in freezing weather.

Many ingenious solutions to traffic and other problems are on the boards today. To make their ingenuity clear, and to translate them from idea into reality, requires the best of drafting tools.

In pencils, of course, that means Mars, long the standard of professionals. Some outstanding new products have recently been added to the famous line of Mars-Technico push-button holders and leads, Lumograph pencils, and Tradition-Aquarell painting pencils. These include the Mars Pocket-Technico for field use; the efficient Mars lead sharpener and "Draftsman" pencil sharpener with the adjustable point-length feature; Mars Lumochrom, the color-drafting pencils and leads that make color-coding possible; the new Mars Non-Print pencils and leads that "drop out" your notes and sketches when drawings are reproduced.





The 2886 Mars-Lumograph drawing pencil, 19 degrees, EXEXB to 9H. The 1001 Mars-Technico push-button lead holder. 1904 Mars-Lumograph imported leads, 18 degrees, EXB to 9H. Mars-Lumochrom color-drafting pencil, 24 colors.

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The Record Reports

standards, sponsored by American Standards Association—Hotel Roosevelt, New York City

20-21 Conference on Electronic Computation, sponsored by Kansas City Section, American Society of Civil Engineers, and Structural Division, A.S.C.E. —Kansas City

20-22 44th annual convention, Florida Association of Architects —Deauville Hotel, Miami Beach

22-25 Fifth annual Building Products Exposition, sponsored by National Retail Lumber Dealers Association—International Amphitheater, Chicago

30ff Annual meeting, American Society of Mechanical Engineers (through Dec. 5)—Hotels Statler and Sheraton-McAlpin, New York City

Office Notes

Offices Opened

Clyde M. Alston announces that he is engaged in his own name as consulting engineer in heating, ventilating, air conditioning, plumbing, electrical engineering at 397 Clinton St., Hempstead, L. I., N. Y.

Robert Wielager, A.I.A., and William B. Eaton, A.I.A., announce the formation of a partnership, Wielage & Eaton, Architects, with offices at 1303 S. Dale Mabry, Tampa, Fla.

Firm Changes

Fisher, Nes, Campbell & Associates, Architects, 2120 N. Charles St., Baltimore 18, Md., announce the admission to partnership of Carson M. Cornbrooks, Allen C. Hopkins, and Charles H. Richter, Jr.

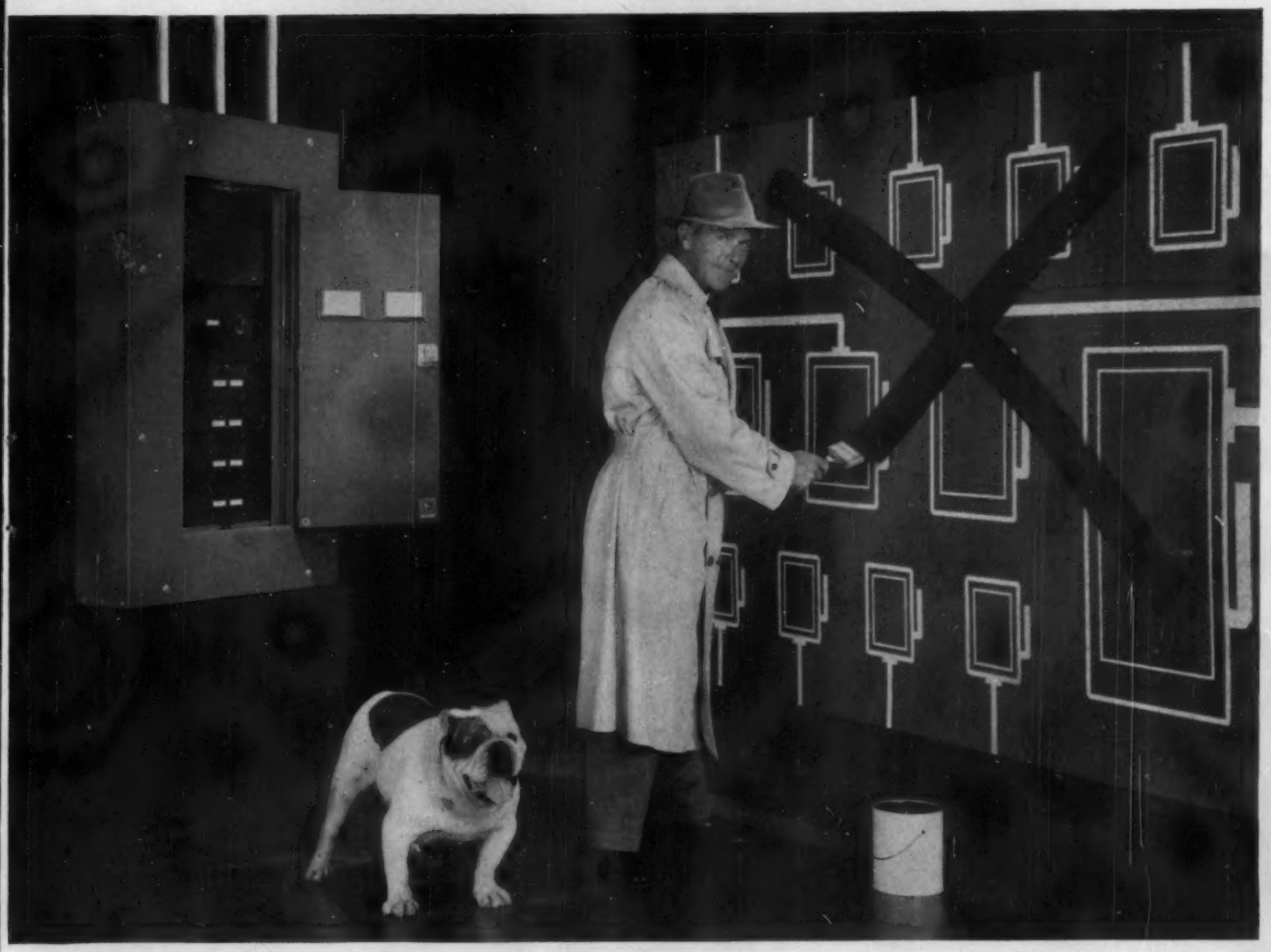
Seymour R. Joseph of the firm of Joseph and Vladeck, Architects, 1841 Broadway, New York 23, N. Y., announces that John Alfred Wahl, A.I.A., has joined the staff as production manager.

Ketchum and Sharp, Architects, announce that Paul Nelson, Architect, is associated with the firm in the field of hospital planning. The firm, now Ketchum and Sharp, Paul Nelson, Associated Architects, is at 227 E. 44th St., New York 17, N. Y.

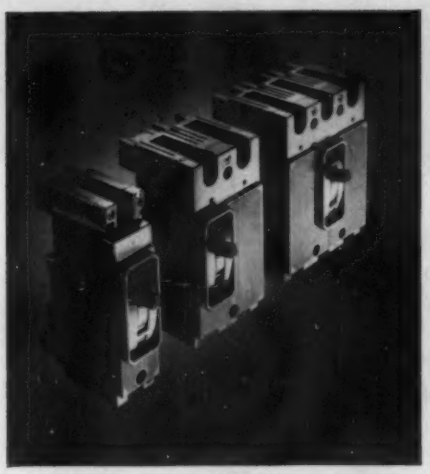
New Addresses

Castellucci & Galli, Inc., Engineers, 75 Empire St., Providence, R. I.

Robert Zion-Harold Breen, Site Planners-Landscape Architects 141 E. 44th St., New York 17, N. Y.



Compact power panels . . . *save space, insure safety!*



I-T-E molded case type "ET" circuit breakers in BullDog power panels become the nerve center of commercial and industrial buildings. They cover a range of needs from the 100-amp "E" frame 1, 2 and 3 pole breakers to 600-amp "LM" frame 2 and 3 pole breakers.

Whatever your power requirements, BullDog power panels with I-T-E molded-case circuit breakers meet them . . . with bus capacity up to 1200 amps. The compact control centers mount on walls where space is at a premium, install quickly and easily, present a neat, modern appearance.

Your clients get two-way protection with I-T-E circuit breakers. Magnetic trip insures split-second protection against shorts—thermal time delay guards against overloads. The breakers provide unsurpassed overcurrent protection with the ability to carry continuous current rating indefinitely. A common tripper bar operates all poles simultaneously on two or three pole devices.

Specify BullDog power panels with I-T-E molded-case circuit breakers. See your electrical distributor, BullDog field engineer or write BullDog direct.

© BEPCO

BULLDOG

BullDog Electric Products Company, Division of I-T-E Circuit Breaker Company, Detroit 32, Mich. *BullDog Export Division:* 13 East 40th St., New York 16, N.Y. *In Canada:* BullDog Electric Products Co. (Canada) Ltd., 80 Clayson Rd., Toronto 15, Ont.

HEAT BETTER ELECTRICALLY

Designing Industrial

Here's why to specify

FESCO®

Roof Insulation Board



For Favorable Insurance Rates: Because Fesco Board is formed of all-mineral perlite, it provides the ultimate in incombustibility, exceeding the maximum code ratings. Even under extreme temperatures Fesco Board remains physically stable, contributing importantly to fire containment. Fesco Board carries the label of Underwriter's Laboratories, Inc.

For Maximum Insulation: Because Fesco Board has no wick-like action (as do fibrous boards) it remains essentially dry on the job and in the job. Fesco Board absorbs only 1.5% water by volume on 24 hours total immersion. Remember, as moisture content goes up, insulation value goes down!

For Faster Laying: It is not uncommon for mechanized crews to place and cover, with 4 plys of roofing, 8 squares of Fesco per day per man. High in compressive strength and scuff resistance, Fesco withstands the weight and wear of high speed, mechanical roof application.

For Better Workmanship: Smaller (24″ x 36″) size permits easy handling, accurate placement. And Fesco Board cuts cleanly, quickly and evenly, for shaping to flashings, hatches, monitors, and other deck openings.

For Longer Roof Life: All-mineral perlite is chemically inert, and non-absorptive — will not rot, mildew, deteriorate. This permanent physical stability permits Fesco Board to withstand the heavy roof traffic normal to industrial occupancy. Fesco Board has a compression resistance of 174.8 P.S.I.

For Lighter Weight: Fesco Board weighs only nine ounces per board foot, yet will not expand, shrink or curl. Linear change at 100% R.H. at 10 days is only $+\frac{1}{5}$ of 1%.

Buildings?

PROJECT: Edgar's Warehouses, Inc.,
Toledo, Ohio
ENGINEER: Campbell Engineering, Inc.,
Detroit, Michigan
GENERAL CONTRACTOR: H. F. Campbell Construction
Company, Inc., Detroit, Michigan
ROOFING CONTRACTOR: Pranis Roofing Company,
Detroit, Michigan
ROOF AREA: 225,080 square feet

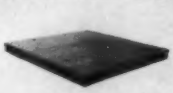


F. E. SCHUNDLER & COMPANY, INC. 504 RAILROAD ST., JOLIET, ILL.

Eastern Office: Chatham Phenix Bldg., 29-28 41st Ave., Long Island City, N.Y.

RATED FIREPROOF MATERIALS-ACOUSTICAL & INSULATING

Developers and producers of incombustible mineral products including Ebbtone Acoustical Tile, Fesco Insulation Board, Coralux Acoustical Plaster, Coralux Perlite Aggregates, Mica Pellet Vermiculite, High Temperature Insulating Blocks and Insulating Cement.

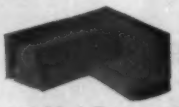

Fesco Board®

Insulating Cement

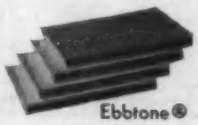

Coralux® Acoustical Plaster

Mica Pellet Vermiculite

MEMBER


153 High Temperature Insulation Blocks

Coralux® Perlite Aggregates


Ebbtone® Acoustical Tile



NEW BENDIX "WEATHERMAN" . . .

functional flair for your building designs

Bendix' new "Weatherman"*, for accurate and instant reporting of just how the weather is outside, is a natural eye catcher. It's adaptable to a variety of buildings such as airports, banks, schools, TV stations, and many others where this public service can be a "built-in" feature. It is also adaptable to existing structures. Weather conditions are indicated on large and colorful dials, showing outdoor temperature, relative humidity, rainfall, atmospheric pressure, wind speed, and wind direction.

With the exception of the barometric pressure unit, each indicator is actuated by a remote (rooftop) transmitter and is connected to the transmitter by electric cable. "Weatherman" indicators and transmitters can also be obtained as individual units.

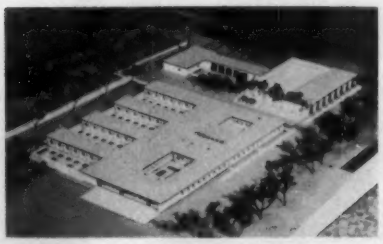
The "Weatherman" is made by Bendix Friez, makers of weather-data instruments for more than eighty years. For further information and installation data, write to Bendix Friez, 1320 Taylor Avenue, Baltimore 4, Maryland.

*REG. U.S. PAT. OFF.

Friez Instrument Division

Bendix AVIATION CORPORATION

The Record Reports



Danish Nursing Home Planned for Care and Treatment of Spastics

The occupational nursing home for spastics being built at Hobro, Denmark, is believed by its owners, the Danish Society for the Welfare of Spastics, to be the first institution of its kind in the world. The decision to establish the center was based on the findings of a survey conducted by the society, which showed that most of Denmark's 5500 spastics had received only parental care and treatment, and that intensive training, when available, had produced great improvement.

At Hobro, living accommodations will be provided for 32 resident patients; therapeutic facilities will serve these patients as well as a "varying number" of outpatients.

As outlined by the architects, Carlo Odgard and Aaby Sorensen, the two main problems to be solved in the design were to include rooms for both physical therapy and the teaching of skills, without lending a school-like air to the buildings; and to achieve a balance between easy social exchange and a sense of privacy for the residents. To solve the first problem, the architects placed most workshops and classrooms along the major corridor, to encourage patients to move "voluntarily" from one area to another; the workshops and library, with no corridor walls, actually become part of this space, while the reading room, though connected by a door to the corridor, is separated from traffic and noise by a partition. A music room and a game room, like the reading room and library, open onto one of the atriums; they cannot be entered, however, from the main corridor.

This open planning will help to solve one part of the second problem —that of easy social exchange. For privacy, each of the patients will be assigned a private room in one of the four wings. Each of the patient wings has been designed with one double room for the treatment of couples; until they are needed, they will be used as lounges. All of the rooms will overlook walled gardens.

"I always specify Hako floor tile"



Builder: "Individuality. That's what the buyers want. Got any more suggestions?"

Architect: "Yep—floors. Give them color, pattern. A real personal effect."

Builder: "How do you do it within MY cost structure? I've got to meet competitive prices!"

Architect: "Easy. Use asphalt tile—the colors and floor patterns make every home different inside. And the material is economical."

Builder: "Sounds good. We'd have no trouble putting it in and I'll have something that gives me a selling plus. I suppose any tile will do the job?"

Architect: "Oh no! I want you to be satisfied with color, price and value. That's why I always specify HAKO."

HAKO BUILDING PRODUCTS

A DIVISION OF MASTIC TILE CORPORATION OF AMERICA

Houston, Tex. • Joliet, Ill. • Long Beach, Calif. • Newburgh, N. Y.

Asphalt Tile • Vinylflex • Polykrome • CorkAtile
Parquetry • Coronet Plastic Wall Tile

HAKO

For best results we recommend Milmark® wax . . . cleaner . . . adhesives

HA-22

Hako Building Products
Division of Mastic Tile Corp. of America
Dept. HB-9, P.O. Box 128, Vails Gate, N. Y.

Please send me full details and specification data on Hako Asphalt and Vinyl-Asbestos Tile.

NAME _____

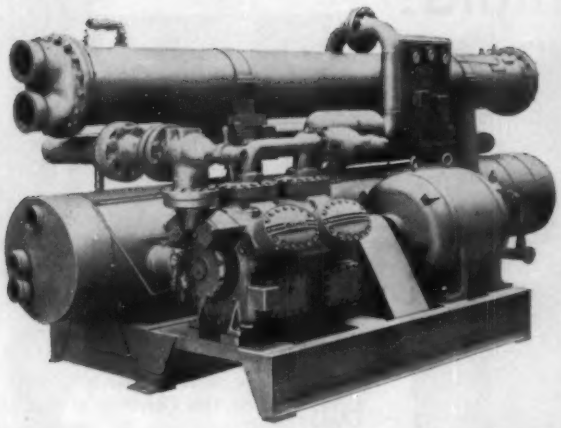
ADDRESS _____

CITY _____ ZONE _____ STATE _____

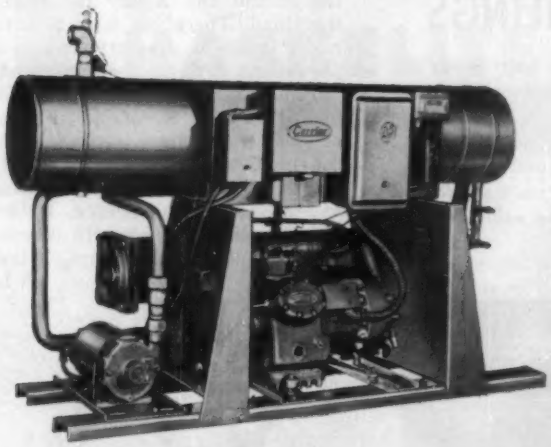
WHICH WATER COOLING MACHINE IS BEST FOR AIR CONDITIONING AND PROCESS REFRIGERATION JOBS?

That depends on the job. Capacity requirements, available space, water supplies and over-all owning and operating costs are important factors in determining which machine is best. Carrier offers a full line of completely packaged water cooling machines with capacities from 5 to 139 tons. All are pre-engineered, assembled and tested for a perfectly balanced refrigeration cycle. Compactness and light weight have been built right into these machines, too, enabling them to go places where others won't. Their initial cost is lower than comparable units assembled from individual components from various sources. And, since they are delivered to the job requiring only simple water and electrical connections, they provide definite savings in installation time and costs. Their advantages are described briefly on the opposite page. For complete information, see your Carrier dealer. Or write Carrier Corporation, Syracuse, New York.

Carrier Air Conditioning · Refrigeration · Industrial Heating



If the job is large, Carrier Model 30C Water Cooling Machines like this will satisfy the cooling requirements of most office and apartment buildings, hotels, hospitals or schools. The entire assembly, including controls, interconnecting refrigerant piping, valves and fittings, has been closely integrated so that the machine will operate with greatest economy. An automatic capacity control saves power by varying compressor capacity in response to cooling load requirements. Capacity range: 85 to 139 tons of refrigeration.



If the job is small, Carrier Model 30E Water Cooling Machines are recommended both as a source of chilled water for air conditioning systems or a source of refrigeration for small process cooling jobs. The units are so compact, light and vibration-free that they can be installed almost anywhere without expensive bases and foundations. For example, the 20-ton model is only 29 inches wide and has an operating weight of only 2300 pounds. Model 30E units are available also for use with evaporative condensers. In 6 sizes with capacities ranging from 5 to 20 tons.



If the job is medium sized, Carrier Model 30K Hermetic Water Cooling Machines offer a dependable, economical solution. No field alignment of the compressor and its driving electrical motor is necessary—both are hermetically sealed in a sturdy, cast-iron casing. A complete control center is included on all units with wiring provided between the motor and its starting equipment and between all installed controls. Capacities range from 25 to 60 tons of refrigeration. If water supplies are critical, other models are available for use with evaporative refrigerant condensers.

A New Lighting Formula!

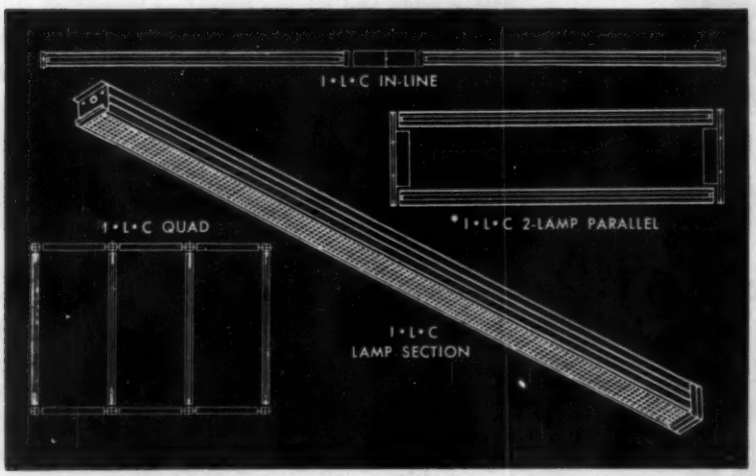
I·L·C + P G = 25% more lumens per foot with use of ONLY 1 LAMP

INDIRECT LUMINOUS CEILINGS

I·L·C—the first lighting fixture designed to use Power Groove fluorescent lamps with complete visual comfort for commercial lighting at 100 to 250 ft. candles.

Therefore, I·L·C with only one P. G. lamp actually provides 25% more lumens per foot than other units with two lamps when used in large selling and display areas. It all adds up to—more and better quality light at less cost with I·L·C.

3 BASIC I·L·C ARRANGEMENTS



I·L·C IN-LINE: Continuous single row tandem arrangements of two or more lamps with associated ballast enclosures and hangers.

I·L·C 2-LAMP PARALLEL: Two lamps in parallel arrangement on 24" centers, for individual or continuous row installations.

I·L·C QUAD: A multiple lamp system with provision for four or more 72" or 96" lamps in parallel and in-line arrangements, or both, and with spacing between lamps of 4', 6' or 8' as required.

For complete details send for Bulletin 5257

581 A

SILVRAY LIGHTING, INC.
BOUND BROOK, NEW JERSEY

The Record Reports



$2.5 Million Hospital Extension Dedicated in Philadelphia

Philadelphia's Episcopal Hospital, in observance of its 100th anniversary, has opened the Centennial Building, the latest addition to the hospital. The new building's function is general nursing care, with 63 beds on the fourth and fifth floors, doctors' offices on the first, operating rooms on the second and X-Ray facilities on the third. The sixth floor is temporarily in use as quarters for resident physicians, but will be converted to nursing rooms when a projected doctors' residence is completed. Traffic between the Centennial Building and the older parts of the hospital is handled by an underground passage and a second-floor bridge. Exterior finish is salmon brick with limestone pilasters and aluminum window frames. Vincent G. Kling, A.I.A., was the architect.



Illinois Hospital Plans Clinic for Diagnosis and Therapy

Scheduled for 1959 completion, a $1.1 million addition to the Carle Hospital Clinic in Urbana, Ill., will house all of the hospital's diagnostic and therapy departments. The building will be leased by 37 physicians in group practice. Designed with especial attention to the seven-room X-Ray section: an automatic film developer and a two-way conveyor belt to move plates quickly to and from the dark room. The hospital's concrete columns were placed outside to allow flush interior walls for the installation of this conveyor system. Records will be kept in the penthouse on the fourth floor. Ellerbe & Co. are the architects; the general contractor is Felmley-Dickerson.

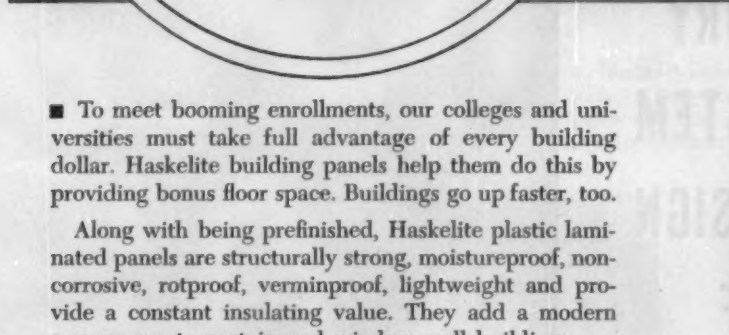
Another UNIVERSITY builds the modern way... with HASKELITE® PANELS

Taylor University in Upland, Indiana is the latest university to utilize Haskelite building panels. This 176-student dormitory requires very little maintenance. Architect—Orus O. Eash, Ft. Wayne, Ind. Contractor—Bowman Construction Co.

■ To meet booming enrollments, our colleges and universities must take full advantage of every building dollar. Haskelite building panels help them do this by providing bonus floor space. Buildings go up faster, too.

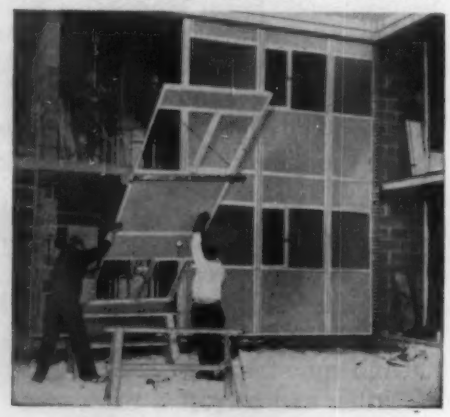
Along with being prefinished, Haskelite plastic laminated panels are structurally strong, moistureproof, noncorrosive, rotproof, verminproof, lightweight and provide a constant insulating value. They add a modern appearance to curtain and window wall buildings . . . are easily installed with a minimum of labor.

Haskelite panels are available in a wide range of stock sizes and thicknesses, or in special sizes when specified. For the complete story on the advantages of Haskelite panels, write: Haskelite Manufacturing Corporation, Department BQ-9, Grand Rapids 2, Mich.

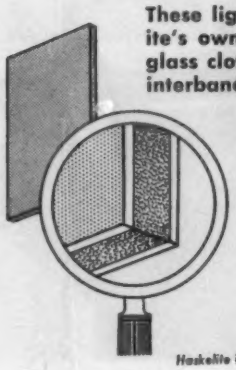


The modern, attractive appearance that can be gained with Haskelite panels is shown here in the students' dormitory at Marion College, Marion Ind. Architect—Orus O. Eash. Contractor—Bowman Construction Co.

New student housing at Michigan State University goes up rapidly with Haskelite panels. Entire wall can be installed without expensive erection equipment. Architect—Manson Carver Associates, Lansing, Mich. Contractor—Christman Co.

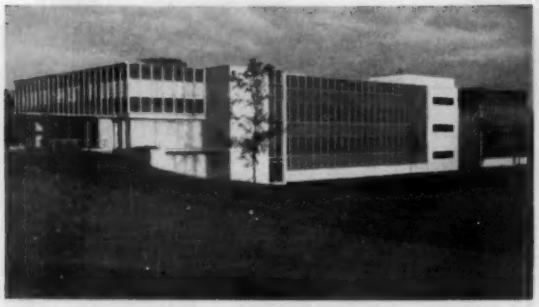


These lightweight panels incorporate Haskelite's own Polyester Resin impregnated fiberglass cloth faces, bonded to cement asbestos interbands, and a foamed polystyrene core.



HASKELITE
MANUFACTURING CORPORATION
Grand Rapids 2, Michigan
Subsidiary of Evans Products Company

Haskelite is a registered trademark. See our listing in Sweet's Catalog.

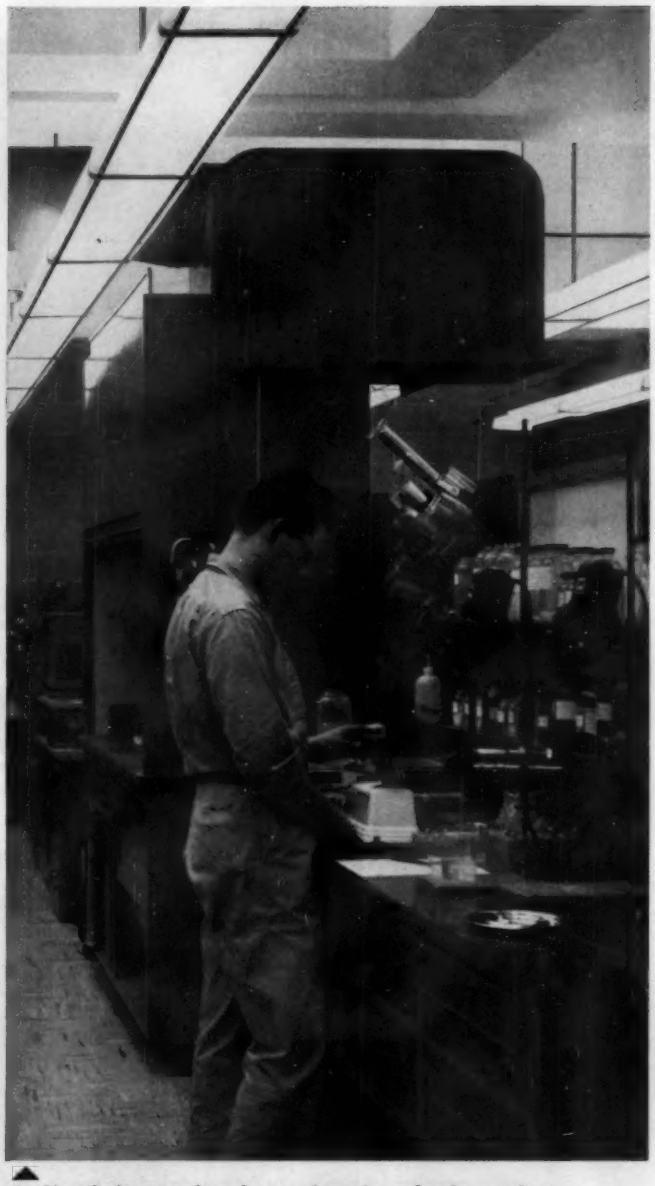


AN ARCHITECTURAL FIRST:

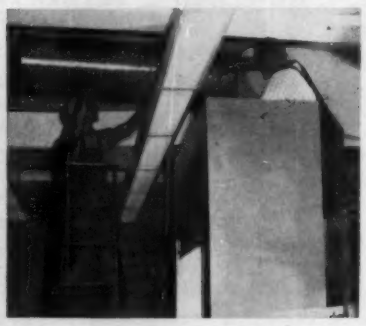
UNIQUE LABORATORY FUME-EXHAUST SYSTEM DEMONSTRATES DESIGN VERSATILITY OF REINFORCED PLASTICS

Of all the decorative and functional applications of reinforced polyesters in Monsanto's new suburban St. Louis research laboratory, you'll find none more newsworthy than the laboratory exhaust system.

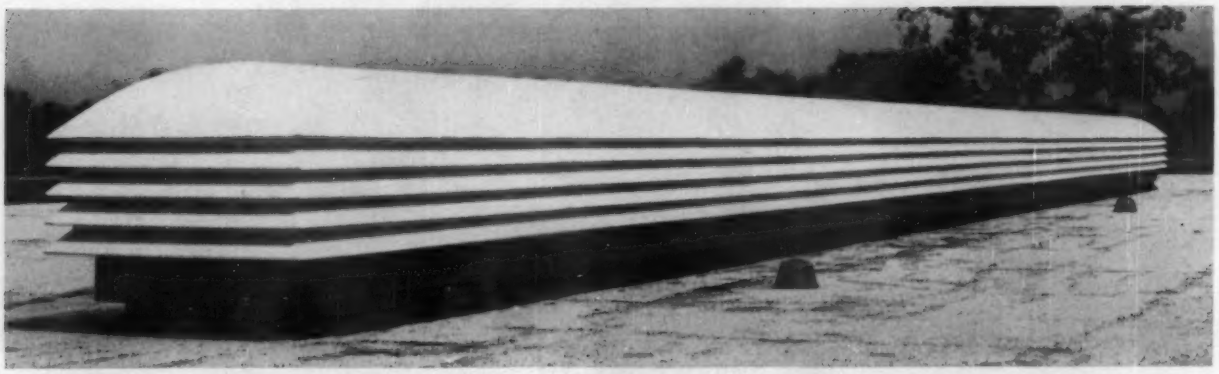
Its individual components vividly point up the construction material's major architectural and engineering advantages: design flexibility . . . color ranges . . . ease of fabrication, handling and installation . . . outstanding strength-to-weight ratio . . . weather and corrosion resistance.



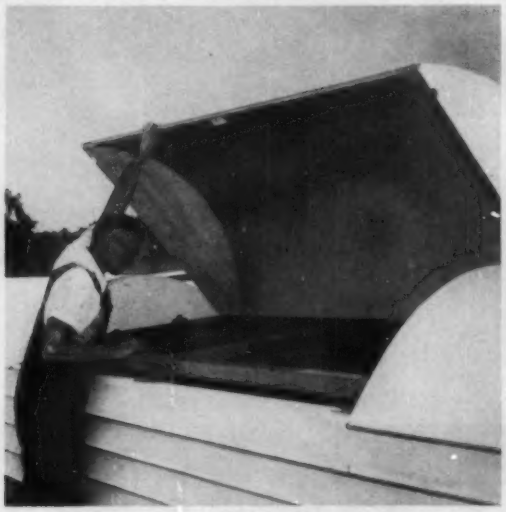
1. Hood plenum chamber and portion of exhaust duct, *both fabricated of reinforced polyester plastic, are visible behind research chemist. Corrosive fumes and gases as well as strong laboratory odors are quickly and efficiently vented through this maintenance-free system.*



2. More than 1000 feet of lightweight, ⅛-inch reinforced polyester ducts *connect hoods and damper plenums to the roof-mounted exhaust fans. Duct joints, made quickly and easily on the spot, used liquid polyester and glass-fiber sleeves.*



3. Louvered roof-hugging roof-top monitor *houses 36 exhaust fans. Made up of 12 separate molded reinforced polyester sections, the monitor has a total span of more than 100 feet . . . is not visible from the ground to interfere with the clean, square lines of the building.*



4. Molded monitor section lid *is hinged to open wide for easy access to fans and motors. Up to four power units are protected by each section of the tough, weather-resistant polyester housing.*



5. Roof-mounted fans *like the one shown here (disassembled for demonstration purposes) are molded completely of rugged, impact-resistant reinforced polyester. Each fan is capable of moving 3000 cu. ft. of air per minute, operates quietly and efficiently.*

This unique fume-exhaust system demonstrates only a handful of the design and construction possibilities open to you through the use of versatile polyester laminations and moldings . . . thanks to the tremendous strides being made in polyester resin technology, fabrication and molding techniques. For up-to-date lists of molders and laminators specializing in polyester-reinforced applications who can work with you to your own specifications, write:

Monsanto

MONSANTO CHEMICAL COMPANY
Organic Chemicals Division
Dept. RI8-3
St. Louis 24, Mo.



COMPLETELY **NEW!**

SEAL AND HARDEN NEW CONCRETE FLOORS BETTER THAN EVER BEFORE . . .

TREMSEAL-20

REPLACES CHEMICAL HARDENERS —at lower cost!

Tremseal-20 is a radically new, amazingly superior seal for new concrete floors, markedly better than conventional magnesium fluorosilicate hardeners and oleo-resinous seals. It is the modern way to seal and harden concrete floors—*and at lower cost applied.*

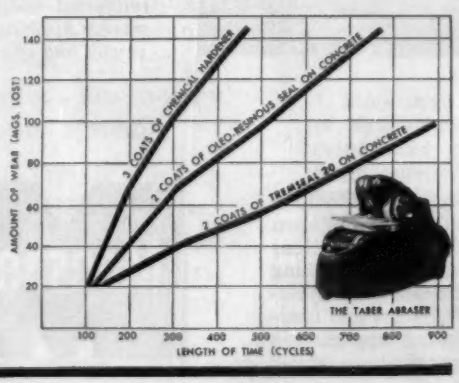
WEARS TWICE AS LONG AS CONVENTIONAL OLEO-RESINOUS SEALS!

An outstanding advantage of Tremseal-20 is enormously increased resistance to abrasion—it wears twice as long as older type seals (see chart).

APPLY TO 7 DAY OLD CONCRETE—DRIES IN 3 HOURS!

Tremseal-20 can be applied to new floors only 7 days old. It dries in 3 hours to a flint-like hardness. Possesses remarkable adhesion even to smooth, hard-trowelled concrete. Ask your Tremco Man for a sample or write The Tremco Manufacturing Co., 8701 Kinsman Road, Cleveland 4, Ohio., or The Tremco Manufacturing Co. (Canada) Ltd., Leaside, Toronto.

This test was conducted in the presence of, and certified by Cosma Testing Laboratories, a leading independent laboratory. The Tabor Abraser (lower right) was used on test panels treated with (1) chemical hardener (2) oleo-resinous seal and (3) Tremseal-20. Note Tremseal-20's obvious superiority in abrasion resistance.



TREMCO

PRODUCTS AND METHODS FOR BUILDING MAINTENANCE & CONSTRUCTION



Cottage-Type Scheme Developed as Home for Retarded Children

An enlightened approach to the problem of providing public facilities for the care of retarded children is reflected in the Missouri State School at Higginsville, Mo., where architects Kivett and Myers and McCallum have developed the cottage-type scheme shown on these pages. The first two "cottages" have been occupied since early 1956; three more are under construction for occupancy late this year. At present the Higginsville project is an expansion of an existing institution at Marshall, some 40 miles away; but the proposed master plan would provide ultimately for 1500 children in a self-contained institution developed in a campus arrangement of 80-child units like those shown here plus their supporting facilities.

The cottage plan evolved out of extensive research by the architects, including inspection of many institutions of the type as well as consultation with leading authorities.

Each cottage building is essentially a pair of self-contained 40-child units consisting of dormitory, day





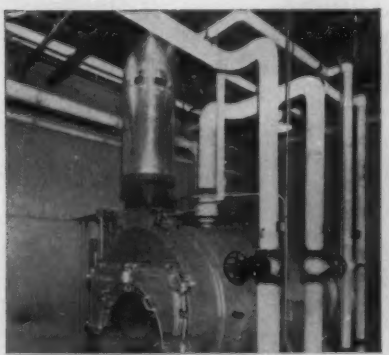
Low cost refractory stack outlasts steel

Low cost — The Van-Packer Industrial Stack is made of prefabricated sections for economy and easy installation. It costs no more than a steel stack, yet lasts substantially longer. Costs only a third as much as a brick stack.

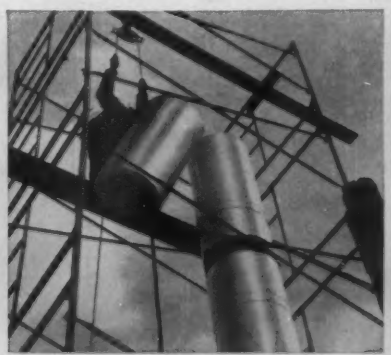
Refractory construction — Van-Packer Stack sections are centrifugally-cast of refractory material that will not corrode. Three-foot long sections come in 7 diameters from 10-inch ID to 30-inch ID to meet your requirements.

Needs no maintenance — Sections of the Van-Packer Stack are cemented one on top of another with acidproof cement, and secured with aluminum drawbands. Sections have an aluminum outer jacket that requires no maintenance.

Available nationwide — The Van-Packer Stack is available through local Van-Packer Jobbers and Special Representatives. See "Chimneys — Prefabricated" in Yellow Pages, or write Van-Packer for Bulletin IS-32-54.



Van-Packer Stack with Standard Sections handles boilers and furnaces efficiently. Can be superimposed or floor supported.



Installing this stack is quick and easy. Three-foot sections are simply cemented atop one another with acidproof cement.



Van-Packer Stack with Hi-Temp Sections handles industrial incinerators with flue gas temperatures up to 2000° F.

Van-Packer PREFABRICATED REFRACTORY **Stack**

Van-Packer Company • Division of the Flintkote Company
P. O. Box No. 306, Bettendorf, Iowa • Phone: East Moline, Ill. 3-5288

Sweet's

From Aircraft Domes

PLEXIGLAS

The first "dome skylights" were pilots' enclosures and navigators' astrodomes on military aircraft. These enclosures were, and still are, made of PLEXIGLAS acrylic plastic.

The first dome skylights for buildings, an architectural use that developed directly from the aircraft application, had domes formed from PLEXIGLAS. Why? Because PLEXIGLAS was the best material for the job. It still is.

Domes made of PLEXIGLAS are *superior* on each of the following counts that measure the successful performance of a dome skylight.

- LIGHT TRANSMITTANCE
- DAYLIGHT CONTROL
- HEAT-LIGHT RATIO
- SURFACE BRIGHTNESS
- OUTDOOR STABILITY



to Skylight Domes...

This superiority has been demonstrated at the Rohm & Haas Daylight Laboratory, using standard Illuminating Engineering Society tests and special procedures developed in consultation with the American Society of Heating and Air Conditioning Engineers. Any of the dome skylight manufacturers listed at the right will be glad to go over the test results with you in detail.

For the *best* results, specify skylights with domes of PLEXIGLAS. And remember—only Rohm & Haas makes PLEXIGLAS.

Chemicals for Industry

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

PLEXIGLAS DOME SKYLIGHT MANUFACTURERS

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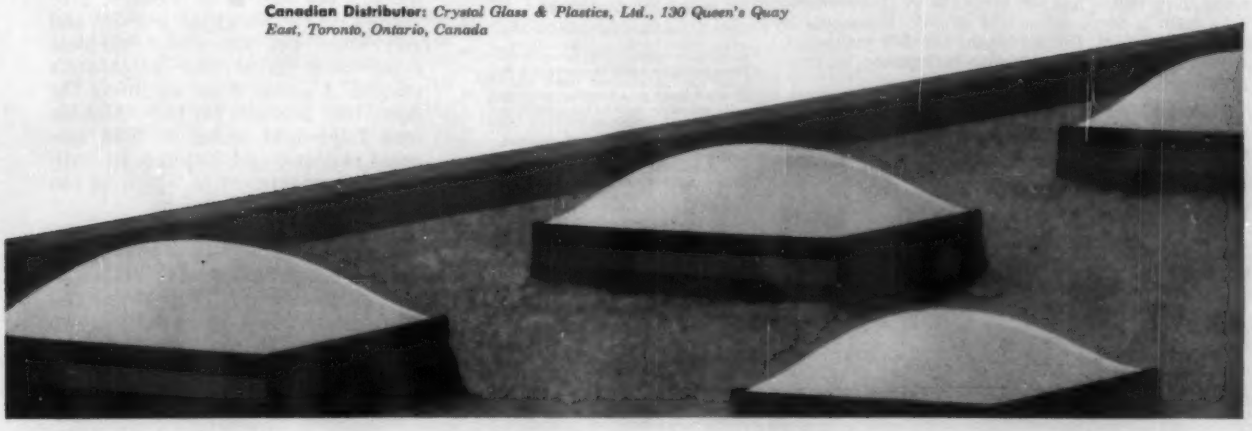
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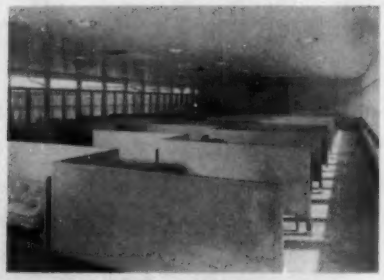


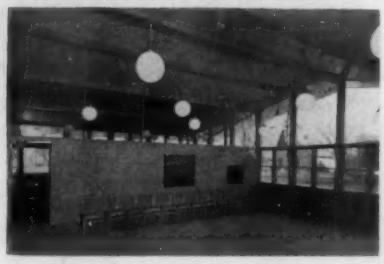
room (living room), dining-room and pantry-kitchen; the two halves adjoin a common visitor's entrance, reception room and parlor (for privacy of parent-child visits).

For the dormitory, a "Z" partition arrangement has been developed to give each child a semi-private cubicle, keep beds away from exterior walls, and prevent overcrowding while still permitting the attendant in charge a view of all activity in the dormitory.

For the present, the dining rooms double as classrooms; the master







plan provides a future separate school. Food is prepared in the central kitchen and distributed in heated food carts to each cottage pantry—"economically," the architects say, "a compromise between the congregate dining rooms common in most institutions and the domestic kitchen-dining room arrangement considered to be the ideal."

The day room, with fireplace and built-in toy and game storage, provides a center for group activity and recreation, and also under complete supervision from the attendant's station. A locker room adjoining the dormitory provides for each child his own full-height locker to hold seasonal clothing and includes an individual compartment in which he can lock cherished possessions.

Each 40-child unit is thus a complete center of activity for its child residents, in which "each child can live, play, learn, eat and sleep, and be cared for, in a group of his own age and mental level, unaffected by the handicaps of the less gifted, free of the frustration arising out of association with the more capable."

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6 "boards" at a time
32 sq. ft. sided with only 50 nails

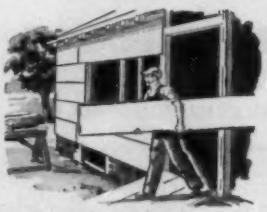


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Homasote Grooved Vertical Siding is the *quality* exterior finish that *any* home can afford. GVS gives the rich effect of 8"-wide vertical planking, yet the 4'-wide panels save costs in both time and materials.

This time-proved material has continuous vertical grooves every 8" and invisible joints—because of the exclusive 3-stage groove-lapping. No other wood-fiber board has the strength of Homasote to take such a deep, attractive groove. Homasote is famous not only for strength, but for insulating values that make homes cooler in Summer, warmer in Winter.

In this buyer's market, prospective home-owners want *value* for their money—in durability and weather-protection as well as appearance. Find out how Homasote GVS—and other Homasote Products and methods—give lasting value. Use the coupon today.



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This is the easy-handling board with *weatherproof* qualities. Homasote Sheathing saves you construction worries—because it need not be covered until convenient. And this famous product adds valuable insulating qualities to the finished house.

One-Man Sheathing is V-grooved in 2' x 8' panels, 5/8" thick. Standard Homasote Sheathing (15/32") comes square-edged in sizes up to 8' x 14'. Use the coupon for complete data.



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☐ Sheathing ☐ Beveled (clapboard) Siding
☐ Underlayments ☐ Homasote Handbook

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CASE #102—Another case where General Electric Factory-Assembled Air Conditioning Units proved more practical than a field-assembled system.



Air conditioned by Refrigeration Distributors Corp., Salt Lake City — Architects: Slack W. and David Winburn, Salt Lake City

The striking modern lines of the new Surety Life Building, Salt Lake City, Utah, pay tribute to the taste and skill of the architects. And the economical, Zone-by-Zone installation of General Electric Air Conditioning pays tribute to their judgement.

GENERAL ELECTRIC ZONE-BY-ZONE AIR CONDITIONING

meets all economy and performance expectations of architects in new Salt Lake City building

Beauty and function go hand in hand—with an incomparable degree of *comfort*—in Salt Lake City's new Surety Life Building. The architects chose a system of air conditioning as modern and effective as the architecture itself:—General Electric Zone-by-Zone Air Conditioning. Here's what Mr. Slack W. Winburn, architect-engineer, has to say about it...

"The General Electric Air Conditioners specified by us have proved highly satisfactory in the Surety Life Building. The points entering into our decision to specify General Electric Zone-by-Zone Air Conditioning offered the following benefits:

"1. Lower first cost, together with lower operating costs.

"2. Three zones of control per floor provide flexibility of control in the northern, central, and southern areas, thereby affording proper temperature control regardless of solar exposure, occupancy, or outside temperature.

"3. With the Zone-by-Zone conditioning approach, the large and long supply ducts normally used in a central-plant system were eliminated.

"4. The system allowed a layout of duct distribution between floors and the placing of diffusers and lights to a module between window mullions. This enables partitions to be moved without tearing into ceiling to make changes.

"5. One important consideration was the easily removable, sealed refrigeration units which can be replaced quickly if repairs are necessary."

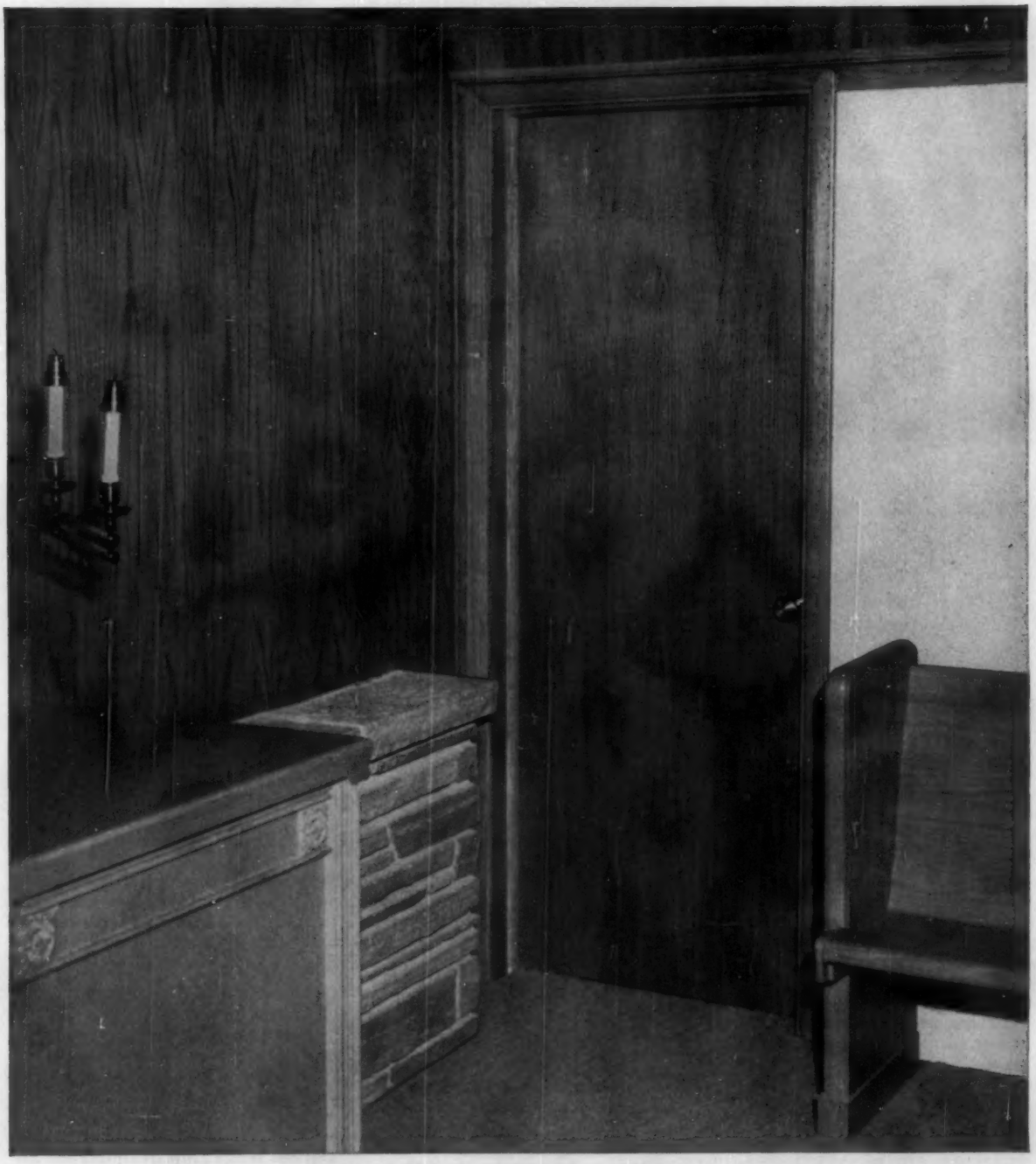
We can add little to Mr. Winburn's words except, perhaps, to note that this case is typical of the results you can expect when you install General Electric Zone-by-Zone Air Conditioning.

General Electric's complete line is flexible enough to meet every air conditioning need for all types of buildings—large or small, old or new. Ceiling-mounted units, water-cooled, up to 7½ tons—air-cooled up to 10 tons. Floor-mounted units—water-cooled—up to 30 tons—air-cooled up to 20 tons. Steam and hot water coils available for all models. Discover how General Electric Factory-Assembled Units can simplify your job. For full details write: General Electric Company, Air Conditioning Department, Troup Highway, Tyler, Texas.

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The warmth and charm of wood are enhanced by the beautifully matched grain pattern of the Curtis New Londoner hollow-core flush doors in the interior of the new Methodist Church, Potter, Nebraska. Distinguishing characteristics of these superior doors are the carefully selected face panels which actually create "pictures in wood." Note how the New Londoner door harmonizes with the beauty and dignity of the wall paneling.

CURTIS

WOODWORK *heart of the home*

CURTIS NEW LONDONER HOLLOW-CORE FLUSH DOORS

Where quality gets its toughest tests you'll find CURTIS Woodwork products



Exterior of Potter, Neb., Methodist Church and meeting hall showing Curtis Silentite wood casements.

In the white light of public service—in schools, churches and other public buildings—Curtis New Londoner flush doors and Curtis Silentite wood windows have established a distinguished record of performance. It is a record well known to architects who choose these superior Curtis products for hundreds of installations yearly.

The special advantage of Curtis New Londoner hollow-core flush doors, besides their beautiful faces, is the patented all-wood core that locks all parts into a single, dimensionally stable unit. Here are doors that do not warp...that are armored against the toughest tests of public use.

Curtis Silentite wood casement and double-hung windows, too, have special features which result in lasting weather protection, lasting ease of operation. They are the finest exponents of today's trend toward the use of wood windows in public buildings.

For complete details, see SWEET'S CATALOG, consult your Curtis Woodwork dealer or mail the coupon for literature.



Silentite casements in the Potter, Neb., Methodist Church and meeting hall provide the extra insulating value of wood, plus positive, controlled operation that prevents swinging and rattling.

CURTIS WOODWORK SILENTITE the Insulated window

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ALBERENE STONE

provides LOW ABSORBENCY protection

Washington Topics

continued from page 52

The report concluded its section on construction of medical schools with this observation, "Unless there is a marked change in social philosophy leading to private gifts or state appropriations on an unprecedented scale, large Federal appropriations will be required."

Air Force Strongly Rebuked on Academy Construction Cost

Ever mindful of its fiscal prerogatives, the House Appropriations Committee in July issued one of its strongest condemnations of military construction procedure. This was directed at the Air Force in connection with what the committee chose to call loose fiscal procedures involved with building the Air Force Academy at Colorado Springs.

The report called attention to the findings of the committee's surveys and investigations staff carried in printed subcommittee hearings. This latter report to the committee refers to the Air Force operating program for the Academy's construction dated February 13, 1956, and comments: "A funding schedule was established to carry out this construction program. USAF advised that the February 13, 1956, program was not based on the architect's design or drawings and has been superseded. Considering the present estimate of the construction cost of the USAFA it is evident to this staff that little, if any, control was exercised over the architect-engineer (AE) to keep the design and plans within the February 13, 1956, operating program. Apparently line items were developed with the stated objective: 'The United States Air Force Academy shall be the finest institution of its kind in the world.' "

The staff report calls attention to the original estimate of $125 million as project construction cost and notes that a recent operating program published in February of this year projects a construction and equipment cost for the academy of $268,871,000.

The full committee, in its report to the House, summarized its conclusions in a statement that characterized the academy project as "an outstanding example of costly and inadequate planning, loose fiscal procedures, and a disregard for justifications submitted to the Congress in support of the construction program at the Academy as to constitute a breach of faith at least with the Committee on Appropriations."



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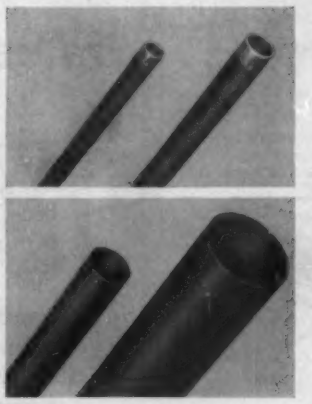
IN 500 CALIFORNIA HOMES —BETH-CO-WELD PIPE

Acre after acre of new-executive homes—that's the Grandview Palos Verdes community development, just south of Los Angeles.

And in each home, hundreds of feet of steel pipe—Beth-Co-Weld steel pipe, low in cost, long in service.

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Bethlehem steel pipe is available in sizes from ⅛ in. to 4 in. in continuous butt-weld, and from 5 in., nominal, through 16 in. OD in electric resistance-weld. Before specifying, write for Bethlehem's new *Handbook of Tubular Products.* Address: Publications Dept., Bethlehem Steel Company, Bethlehem, Pa.

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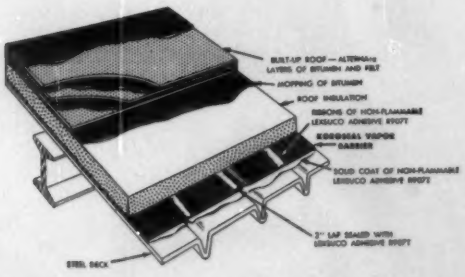
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Big areas get covered fast *the Lexsuco mechanical way! Here a Lexsuco applicator finishes three operations in one pass—applies non-flammable Lexsuco Adhesive R907T to the underside of the Koroseal Vapor Barrier, lays and secures the Koroseal, and puts ribbons of adhesive on top for securing insulation.*

Lexsuco roof constructions with

. . . fire retardant, maximum vapor



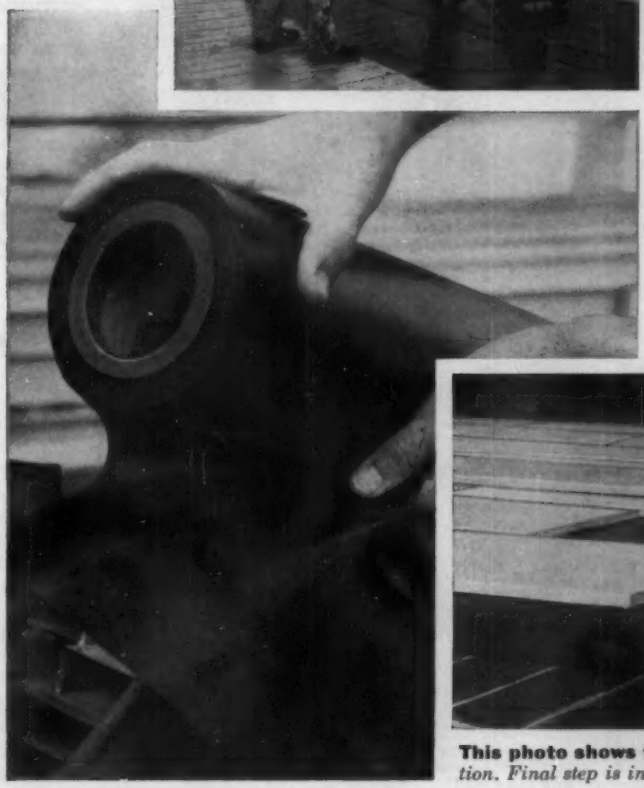
Typical Lexsuco roof construction with Koroseal vapor barrier

WHEN you specify Lexsuco Roof Constructions with a Koroseal Vapor Barrier, you assure three major benefits—(1) a fire retardant construction with Factory Mutual Class 1 rating; (2) maximum vapor barrier protection; and (3) fast, economical installation.

Lexsuco Roof Contructions with Koroseal Vapor Barrier will not feed a fire because there is no asphalt between roof deck and insulation to give off flammable gases. Fire-retardant Koroseal replaces asphaltic materials.

Koroseal is a proved vapor barrier. It eliminates moisture migration from within building, prevents pitch drippage,





Lexsuco's semi-mechanical method *is fast for medium or small jobs. Ribbons of adhesive are applied with spreader and rolled into a solid coat for securing Koroseal. Then insulation is embedded into the ribbons of adhesive spread over the Koroseal. It's like a production line! A manual method also is practical for small jobs using pouring can instead of spreader.*

B.F.Goodrich Koroseal Vapor Barrier *is a specially compounded fire retardant vinyl material. There is no "or equal".*



This photo shows the steps. *Steel deck, adhesive, Koroseal, adhesive, insulation. Final step is installation of built-up roof layers.*

Koroseal® vapor barrier

resistance, easily installed

helps retain maximum insulating value.

The illustrations above show some typical application methods. Whether your roofing job is large or small, Lexsuco methods and tools help you cut installation costs. Koroseal Vapor Barrier is a specially compounded fire retardant material made by *B.F.Goodrich Industrial Products Company, Marietta, Ohio.*

Mail this coupon for detailed information:

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Dept. AR-9
Box 326, Selon, Ohio

Please send me informative folder on the Lexsuco system of roof construction.

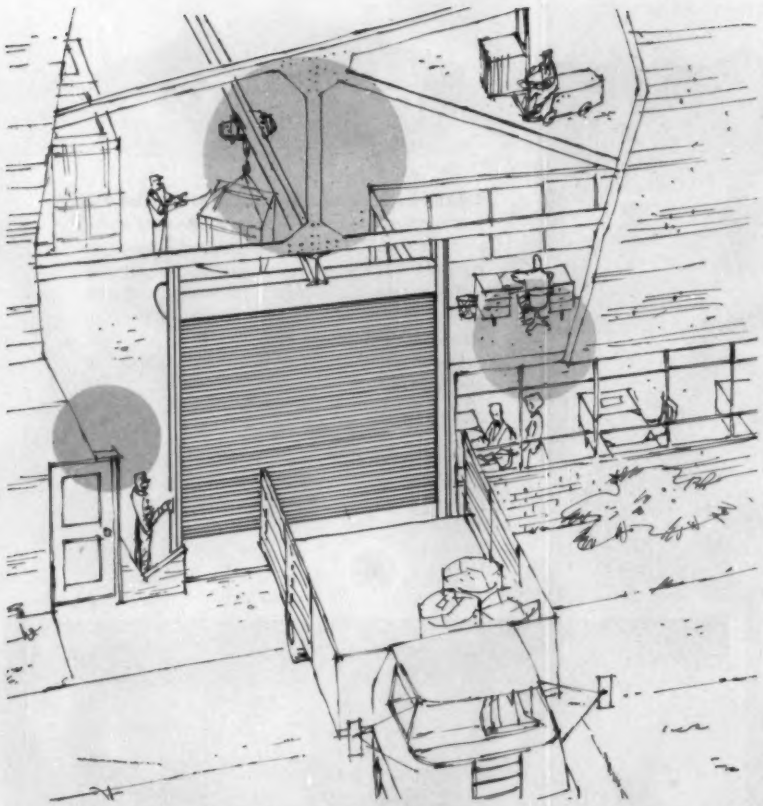
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...and insure complete security

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See Balfour's new catalog in Sweet's Files. You'll find it one of the most comprehensive and easy-to-use guides to service, fire and counter door specifications ever presented. For your personal copy write to Balfour today.

Balfour rolling doors

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Washington Topics

The chief complaint of the committee as far as architectural considerations are concerned seemed to be that additions to design directives as shown in the architects' drawings were approved by the Secretary but were outside the authority and responsibility of the Construction Agency.

An effort was underway to persuade Congress to vote a "ceiling" of approximately $140 million on the total construction cost of the academy project. Reflecting the committee's general attitude on this, the report on the military construction appropriations measure for fiscal 1959 recommended a cut of $1 million in the Air Force request for $4,372,000 for Academy work this fiscal period.

Research and Teaching Facilities Needs Stressed by USPHS

The U. S. Public Health Service continues to call for the construction of more research laboratories and expansion of facilities for training research personnel in the medical field. The latest note of urgency on this subject was sounded by Dr. Aims C. McGuinness, special assistant to the Secretary of Health, Education, and Welfare.

Dr. McGuinness said that more laboratories and more training facilities must be constructed if medical research, already at an all-time high in this country, is to be pursued even more vigorously. More scientific knowledge must be gained on many subjects. Industrial and urban growth, along with other influences in the economy, are multiplying medical problems. He cited as examples air and water pollution, accidents, and protection against radiation.

Speaking of the nation's medical schools, Dr. McGuinness called attention to the fact that many of the buildings are in need of extensive repairs, or are totally obsolescent. There is simply no room to expand enrollments, he observed, adding that most schools, public as well as private, are hard pressed to meet their regular operating expenses and are forced to postpone needed plant improvement. Yet, with a growing population and with important new advances in medical knowledge, the schools now face a larger and more complex job than ever before.

HEW sought Congressional approval of a four-year program of matching grants for the construction of medical teaching facilities.

Dr. McGuinness explained that his



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FIRST BUILDING TO USE THE NICKEL-SAVING ALLEGHENY-PIONEERED STAINLESS STEEL (TYPE 202)



Skidmore, Owings and Merrill—*Architects*...Turner Construction Co.—Gen. Contractor

The Inland Steel Company's new headquarters in Chicago numbers some important firsts among its outstanding features. It is the first large office building to be built in Chicago's loop in 20 years. It is also Chicago's first stainless curtain wall building, and the first building anywhere to use the low-nickel stainless grades pioneered by Allegheny Ludlum.

Allegheny 200-series stainless steels (Types 201 and 202) are the answer to one of the knottiest problems that have faced architects and designers who want to use the superior durability, strength and beauty inherent in stainless steel. Now, with the 200-series it is possible to think in terms of stainless steel without fear of future shortages. That is always an important consideration, and especially so with mass-produced items.

In most applications the 200-series perform as well as the 300-series of stainless steels, and they offer unique advantages of their own. There is some advantage in price, strength is slightly higher and availability is much greater in times of nickel shortage. Weldability, forming and finishing characteristics are virtually the same as with the 300-series.

If these new steels sound interesting to you, let us supply printed information and engineering assistance. ● Write for a copy of *Technical Horizons No. TH2*, containing essential data on the properties and characteristics of Allegheny 200-series low nickel stainless steels. ***Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pennsylvania.***

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RODDIS' 7/16" ARCHITECTURAL

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New solid feel! 7/16" Architectural Craftwall is fabricated from choice hardwood veneers bonded to a special center core of 3/8" Timblend . . . Roddis' new man-made board. This new core is the secret of Architectural Craftwall's superiority. Dimensionally stable, strong and rigid, it assures highest warp resistance, gives maximum freedom from movement on the wall. Architectural Craftwall characteristics equal many of those of the finest 3/4" material.

Fast, easy installation! No underlayment is needed with Architectural Craftwall. Apply directly to studs or furring strips. Use Roddis Contact Cement, or nails if preferred.

Eight prefinished woods! Choose Architectural Craftwall in any of these beautiful, *completely prefinished woods:* Birch, Silver Birch, Maple, Oak, Walnut, Elm, Cherry or Mahogany. An exclusive Roddis finish keeps every panel glowingly beautiful indefinitely. And minimum maintenance is assured. Architectural Craftwall resists scuffs, stains and dirt . . . never needs waxing. Cleans with a damp cloth.

Two popular styles! Architectural Craftwall is available V-grooved only (Style 100) or V-grooved, cross-scored and pegged (Style 300). All panels are V-grooved at veneer joints also. *Ungrooved* Architectural Craftwall, too, can be ordered with matched flitches in the wood of your choice. All styles come in regular plywood sizes . . . plus lengths to 16 feet, in most woods.

Free sample and information! The coupon at right brings a free sample of 7/16" Architectural Craftwall, plus illustrated brochure and complete specifications. Send it today—find out how this new kind of wood paneling gives more beauty, greater practicality . . . at lower cost!

EXCLUSIVE NEW-TYPE CONSTRUCTION

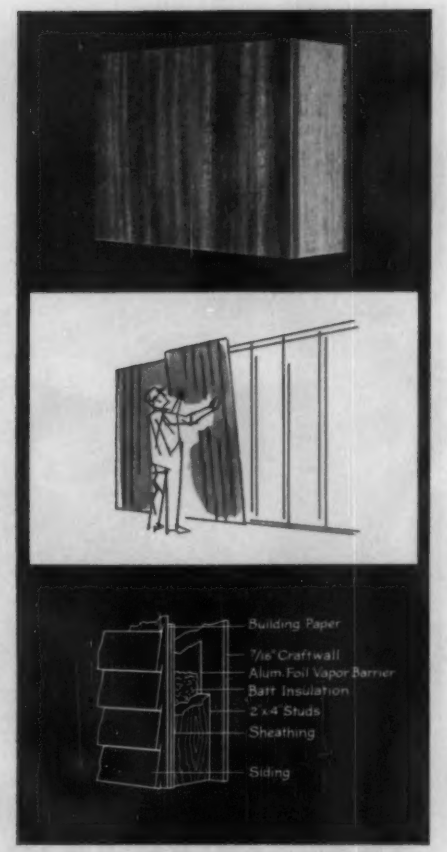
7/16" Architectural Craftwall is formed from hand-selected hardwood veneers bonded to 3/8" center core of extra-stable Timblend . . . Roddis' amazing new wood blend board. Each panel is backed with a protective veneer that is sealed to lock all moisture out.

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Apply Architectural Craftwall direct to studs and save on material and labor. Rigid new 7/16" panels are easy to work with. Once up, they stay put . . . no movement on the wall! Architectural Craftwall is the perfect wood paneling for commercial and residential use.

NOW . . . FAST AND SIMPLE INSTALLATION

It's so easy to install new 7/16" Architectural Craftwall. The diagram shown on the right gives detailed application technique in new construction. For your remodeling jobs Architectural Craftwall can also be nailed or glued directly on any existing wall surfaces.



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a new kind of wood paneling!

EXCLUSIVE TIMBLEND CENTER CORE

7/16" Architectural Craftwall is the only wood paneling on the market with a center core of unique man-made board, Timblend. Made by a special, patented process, Timblend is strong and rigid . . . gives a true "solid feel." Assures greater strength, high warp resistance.



Precision-cut wood shavings in Timblend center core of 7/16" Architectural Craftwall. Center portion of board is composed of larger shavings. The smaller shavings form a smooth, even surface assuring a perfect bond with veneer facings.

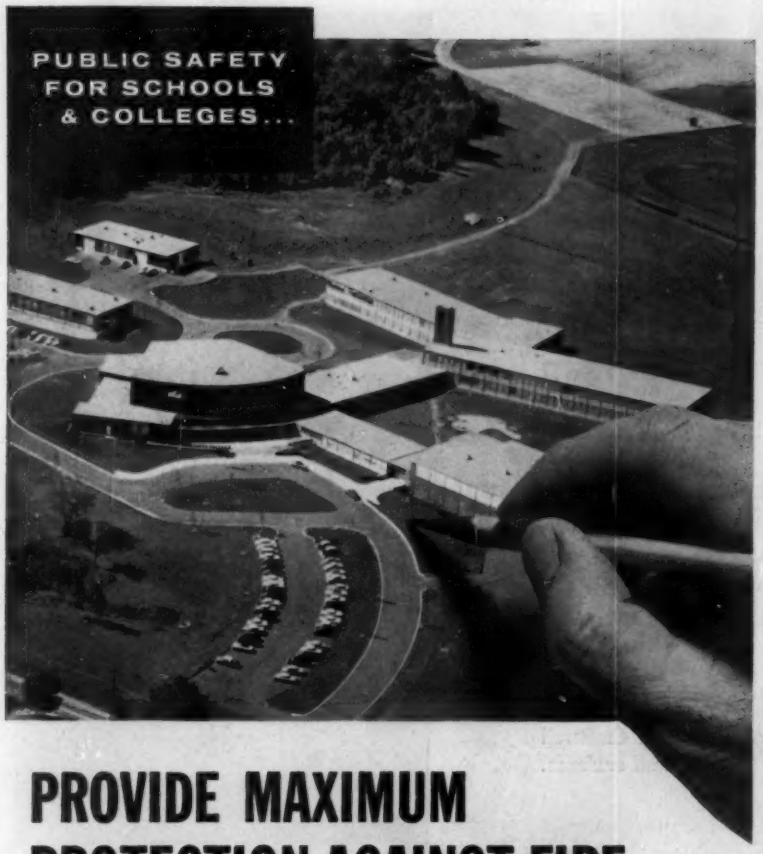
Wood shavings in Timblend core are arranged to criss-cross their grains, like the fingers in the picture. This construction gives greater strength and rigidity . . . keeps Architectural Craftwall stable, gives maximum freedom from movement.



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Washington Topics

department expects to conclude its current survey of about 7000 hospitals on use of services and publish the results early next year. This study is searching out various phases of graduated care plans and will define results.

Planned Public Works Reservoir Computed at $1 Billion

The Community Facilities Administration of the Housing and Home Finance Agency took an appraising look at itself at midyear and announced that a reservoir of planned public works with a construction potential of around $1 billion was being developed by some 600 communities.

Commenting on CFA's progress, Commissioner John C. Hazeltine said, "This program has just completed its most active year since its reactivation in 1954. During the fiscal year just ended, nearly 600 new applications requesting planning assistance were received from local public agencies throughout the nation, and 432 projects were approved for $11.6 million in planning funds.

"The growing interest in this program by local public bodies indicates that it is helping to meet an important need in the development of community facilities and in assisting immediate and future local construction programs."

The types of works being planned with these funds include new water and sewer systems, educational facilities, administration buildings, hospitals and health facilities. and other municipal and area public works.

Approximately 190 additional applications, asking for more than $9 million in planning funds, were being processed in CFA regional offices.

The agency said that about 49 per cent of the approved applications were for sewers and water facilities; 28 per cent for schools and other educational facilities; and the remaining 23 per cent for public buildings, roads, streets, and miscellaneous public facilities.

In the educational facilities category, some 26 projects were for the planning of state university facilities, including classroom, laboratory and other university buildings. These projects were estimated to cost around $33 million.

Under the program, planning funds loaned are interest-free but repayable when construction is started.

"The increasing number of communities utilizing this program and the steady growth of the reservoir of



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At Penn Township Senior High School near Pittsburgh, a workman easily places Steeltex Floor Lath around a steel column. Snug-fitting Steeltex prevents cement drip-through. Architect: Joseph Hoover, AIA, Pittsburgh. Structural Engineer: Leland W. Cook, RPE, Pittsburgh. Contractor: C. De Chicchis & Co., Clairton, Pa.

Six More Architects, Contractors Tell Why Steeltex Saves Money, Speeds and Improves Construction

Whether it's in the Dominican Republic, Puerto Rico, California, New York or Pennsylvania, Steeltex is writing new chapters to a story of construction economy started more than 30 years ago.

Architects and contractors are documenting the story of Steeltex as one answer to steadily rising construction costs and shrinking budgets. They say Steeltex—the wire mesh reinforcing that carries its waterproofed form right on its back—saves money, shortens construction time and gives you a better job.

At the lavish, multi-million dollar Hotel Embajador in the Dominican Republic, Architect Roy F. France specified 244,000 square feet of Steeltex to provide combined form and reinforcing for the roof and seven floors. Said Mr. France:

"Steeltex brought 20 percent savings in time on this big job. Steeltex is easy and quick to install. This brings savings on labor costs."

Mr. France reported similar savings at the beautiful Hotel San Juan Intercontinental in Puerto Rico. This 320-room structure required 250,000 square feet of Steeltex from Pittsburgh Steel Products Division of Pittsburgh Steel Co.

Taylor Construction Co. of Miami, the general contractor, estimated savings through using Steeltex "averaged 19 percent over other systems."

Said Aaron Baer, chief of estimating for Taylor Construction:

"Where thin slab over prefabricated steel or concrete joists is the basis for design, Steeltex is in a class by itself —time-wise and cost-wise—in bringing savings."

At the Atwater, Calif., Research Project School, 30,000 square feet of Steeltex was combined with reinforcing rods to provide support for a thin shell catenary roof construction.

"Steeltex helped create a fireproof span of clean appearance at a cost and insulation factor equivalent to conventional wood joist classroom construction," declared Architect Frank Wynkoop, AIA, of Los Angeles.

At 6010 Wilshire Office Building in Los Angeles, 18,000 square feet of Steeltex Floor Lath saved $5,000 in labor and materials, according to Quinn and Conant, Hollywood contractors.

"Steeltex was installed in just 10 days," said Lewis F. Conant. "If we had used conventional wood forms, we would have taken 30 days.

"We have made comparisons of the cost of concrete slabs using Steeltex as opposed to two-inch planking on wood purlins. We find Steeltex and concrete is approximately 20 percent less expensive and gives the owner much more for his money." Architect for the job was Sidney Eisenshtat, AIA. Structural Engineer: Joseph Sheffet, CEAC, both of Los Angeles.

Similar commendations for Steeltex come from Dean Natali, superintendent for C. De Chicchis



Atwater Research Project School in California has 30,000 square feet of Steeltex installed to provide form in a thin shell catenary roof construction. Architect: Frank Wynkoop, AIA, Los Angeles. Contractor: Graham & Jensen, Merced, Calif.



At 320-room Hotel San Juan Intercontinental, Puerto Rico, 250,000 square feet of Steeltex supports the roof and floors. Taylor Construction Co. of Miami estimates savings through using Steeltex "averaged 19 percent over other systems." Architect: Roy F. France & Son, Miami Beach.

& Co., contractors for construction of the $5-million Penn Township Senior High School near Pittsburgh.

More than 100,000 square feet of Steeltex was installed. "An alternate material would have taken three or four times longer to install than Steeltex," said Mr. Natali.

"We used five men to put down Steeltex in the length of time it would have taken 20 men to install a sheet material."

"On top of that," Mr. Natali continued, "there is less waste with Steeltex because it prevents drip-through of cement to the floor below by fitting snugly around protruding objects."

On Long Island, N. Y., at Plainedge High School, 150,000 square feet of Steeltex provide form and reinforcing for the roof and floors. Architects for construction were Jagow & Heidelberger, Hempstead, L. I.; Structural Engineers: David R. Maiman Associates, Valley Stream, L. I.

George F. Hayden, superintendent for the contractor, Paul J. Roche, Inc., Baldwin, L. I., has used Steeltex for 20 years. Today he still looks to Steeltex to help build stronger, more durable floors and roofs.

"There's no other type of reinforcing material more economical than Steeltex," stated Mr. Hayden. "It's easy to install, eliminates form work and makes for a better slab."

All these benefits of Steeltex—and more—can be put to work for you, too. All it takes is a phone call to the Pittsburgh Steel Products sales office nearest you. Trained engineers are available to help you solve your construction problems. Call today . . . you'll be glad you did tomorrow.



Hotel Embajador in Dominican Republic has 244,000 square feet of Steeltex Floor Lath supporting the floors and roof. Architect Roy F. France of Miami Beach says, "Steeltex brought 20 percent savings in time." Contractor: Merritt-Chapman & Scott Corp., New York.

▸ See Sweets Catalog Section 2-B

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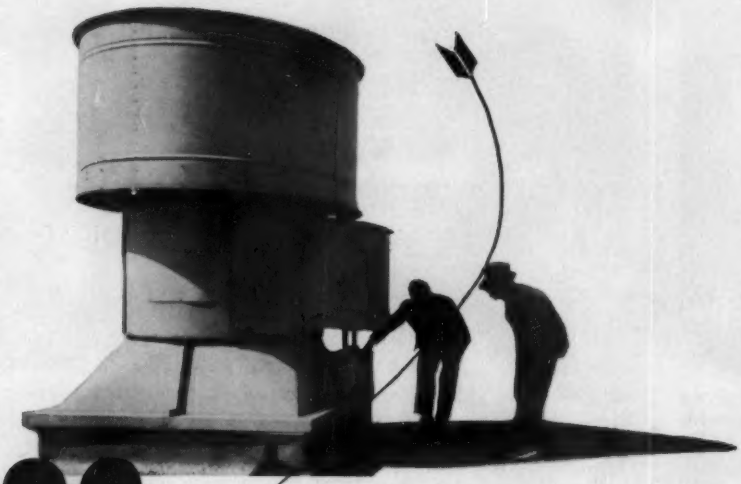
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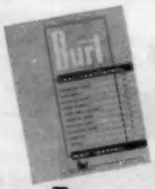
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public works plans tied to local needs and development goals," Commissioner Hazeltine asserted, "is meeting an important national objective. Many localities, otherwise unable to plan ahead for needed community facilities, are using this program to prepare for the construction of essential facilities to meet their expansion problems.

"Advance planning is essential in the preparation of appropriate plans and designs responsible to particular development programs, better cost estimates and proper scheduling of construction, improved financing methods and lower construction costs. The number of projects which have received planning assistance under this program and which have gone into construction in accordance with local schedules is particularly significant.

"As an indication of the benefits of this program to the national economy, the estimated costs of approved projects already under construction totaled over $57 million as of June 30. Planning advances repaid on these projects exceeded $1 million. These repayments can be used to assist other localities in planning essential public works projects."

New AEC Booklet Gives Outline of Construction Procurement

Architects and engineers interested in exploring the potentials residing for them in the Atomic Energy Commission's huge construction program should obtain a copy of the recent AEC publication, "Selling to the AEC." (This can be procured from the U. S. Government Printing Office at Washington, D. C., at the nominal charge of 25 cents per copy.)

The 34-page booklet explains the organization and purchasing program, and lists purchasing officials, products bought, and locations.

It is pointed out that the Commission buys all types of design and construction, ranging from residential and community buildings to complex industrial facilities. Reference is made to AEC's "A Guide for Contracting of Construction and Related Architect-Engineering Services," also obtainable at the Government Printing Office.

Records show that during fiscal year 1957, AEC spent $110 million for construction and $200 million more for materials, not including raw stocks.

This initial purchase generated subcontract awards to industrial con-

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by Herbert S. Conover

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GROUNDS MAINTENANCE HANDBOOK is written with the authority of 28 years of experience in grounds planning and supervision. Herbert S. Conover is presently Landscape Architect for the tremendous St. Lawrence Power Project, with headquarters at Massena, N. Y. Prior to this, he served with TVA, participating in the development of many recreational facilities in the Tennessee Valley, and responsible for over 25,000 acres.

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4. **Equipment.** Selection and use of spraying equipment, mowers, power saws, hand equipment, shredders and chippers, portable generators, seeders, tractors, and many more.
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6. **Weeds and their eradication.** Classifies weeds botanically and practically. Outlines chemicals, tools, and methods for effective control of all types. Also covers brush control and stump treatment.
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10. **Maintenance of picnic areas.** Care of grounds, public facilities, play equipment, sanitary facilities, trees and shrubs, structures, trails. Helpful information on upkeep, and trash and garbage removal.

Remember, the above is just a brief outline of contents.

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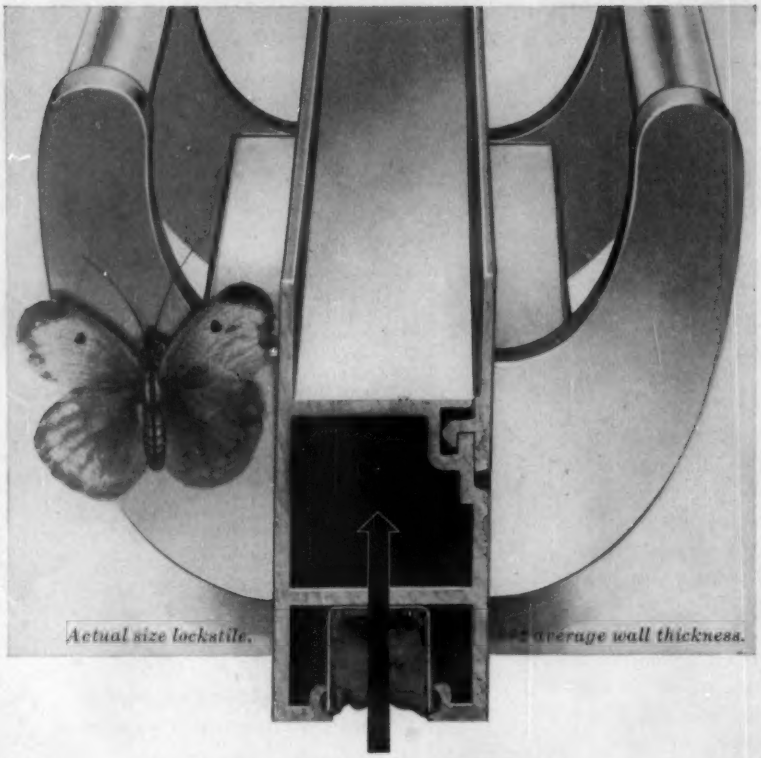
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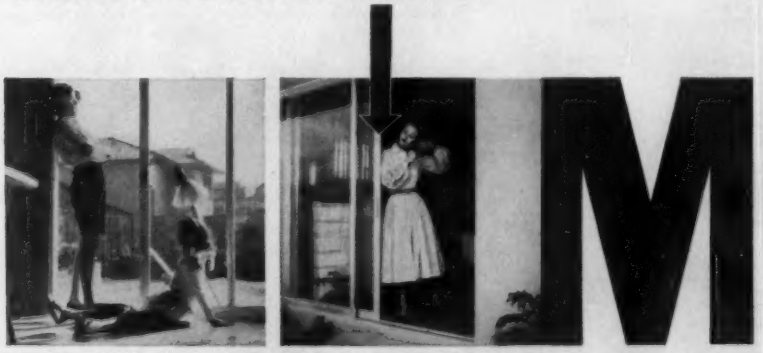
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cerns amounting to $538 million by cost contractors operating and building the plants and laboratories. An additional $1.5 billion in prime contract dollars was spent in fiscal 1957, not related to the regular buying done by AEC. This involved cost of operating plants, research and development laboratories and supporting basic research in universities and nonprofit institutions.

The Commission now operates an integrated industry whose plants and other facilities are valued at approximately $6.9 billion before depreciation.

House Group Asks More Funds for Sewage Treatment Works

While the Administration sought to turn over to the various states all financial responsibility for constructing their waste treatment facilities, the House Public Works Committee came up with a new report indicating the problems in water pollution control are magnifying.

An independent survey by three leading state sanitary engineers concluded that the Federal government would have to contribute $100 million annually in grants-in-aid if the needs of municipalities for sewage treatment works were to be met. Thus the committee proposed a plan whereby the current $50 million authorization be doubled, and authorization for individual grant amount be raised from $250,000 to $500,000.

"It is estimated that treatment-plant construction throughout the country is up 40 per cent over previous years despite a generally unfavorable bond market and decline in other similar fields of construction," the report of the committee stated. "All indications are that 1958 will be another record year with even more states registering a greater amount of construction than in any other previous year."

It was estimated that to maintain sufficient construction over the next decade to clean up municipal pollution of streams and rivers, a total of $500 million will have to be spent each year. This includes Federal, state and local funds.

In supporting its argument for an enlarged Federal program, the committee pointed out that before the present law was enacted, yearly average construction amounted to $250 million but that last year expenditures exceeded $350 million. This it called an indication that cities are falling far short of need.

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Housing *continued from page 28*

sumer goods industries. As a result shelter's share of the average family's income is declining. More significant than this loss of revenue to one sector of the industry is the indication that the home may be losing its place as the center of family life.

There are only a few architects in the country today who have the intimate knowledge of the problems of the large-scale operative builder that is needed to make a practical design contribution. It was proposed that every effort be made to promote more architect-builder cooperation in the future in order that some of the superior livability of many contemporary custom-designed houses may be brought into the lower cost builder's house.

There was some divergence of opinion on how the redesign of the builder house might best be approached. Participants in the course were greatly impressed with the detailed descriptions they heard of three of the most successful large scale building operations in the country: Levitt, National Homes, and Place Homes. All three are constantly striving to improve the design of their homes, but must necessarily do so by accommodating to well-established practices and prejudices.

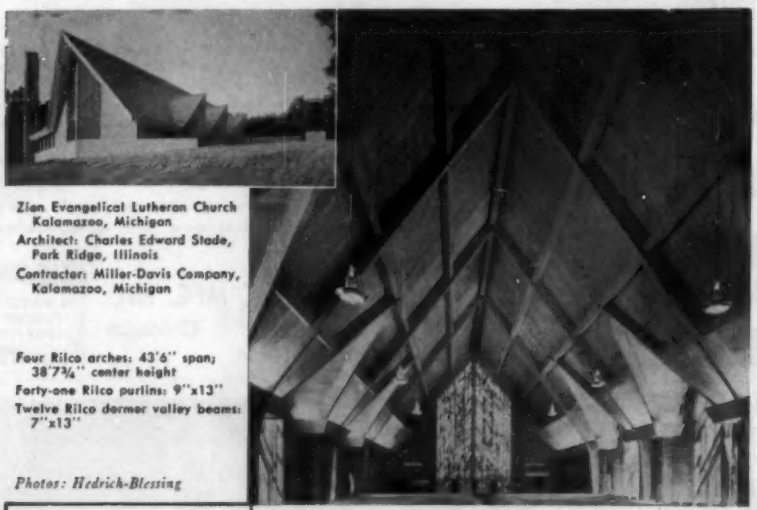
Others felt that more rapid progress could result from a frontal attack on the design problem by an independent group with industry-wide backing. It was felt by some that such a group might be able to exert enough influence to bring changes in financing, legal controls, industry practices and consumer attitudes which so often stand in the way of better design.

Much discussion centered on the lessons to be learned from the success of the mobile home manufacturers who have in the last few years supplied at least ten per cent of the total number of housing units. The trailer home phenomenon was seen not so much as a better way to live, but as an example of the progress that can be made in providing effective living accommodation at very low cost when the traditional restraints associated with "real estate" are removed.

In the realm of new techniques of building, the consensus of opinion was that most of the changes we will see in the coming years would involve ways of shifting more of the work in house building from the site to more carefully managed, mechanized plant operations. Perhaps the most productive contribution that engineering can bring to housing lies in the design of larger, multi-function components with a high degree of pre-finishing.

The issue of consumer acceptance of innovation in housing design and construction was frequently raised by participants in the course. The general feeling was that this was tending to become less of an impediment to progress than it has been in the past. The lead time between the development of a new material or construction technique and its application has been noticeably shortened. However, the house building industry because of its fragmented nature has not been able to make as effective use of good public relations techniques to pave the way for needed innovation as have other industries.

As the sessions of the course were held in M.I.T.'s well known Kresge Auditorium (designed by Eero Saarinen) the participants were able to experience at first hand a product of a new building technology. The hot, humid weather that prevailed during the two weeks of the program was another reason the Kresge shell, one of the few air conditioned buildings at M.I.T., was appreciated.



Zion Evangelical Lutheran Church
Kalamazoo, Michigan
Architect: Charles Edward Stade, Park Ridge, Illinois
Contractor: Miller-Davis Company, Kalamazoo, Michigan

Four Rilco arches: 43'6" span; 38'7¾" center height
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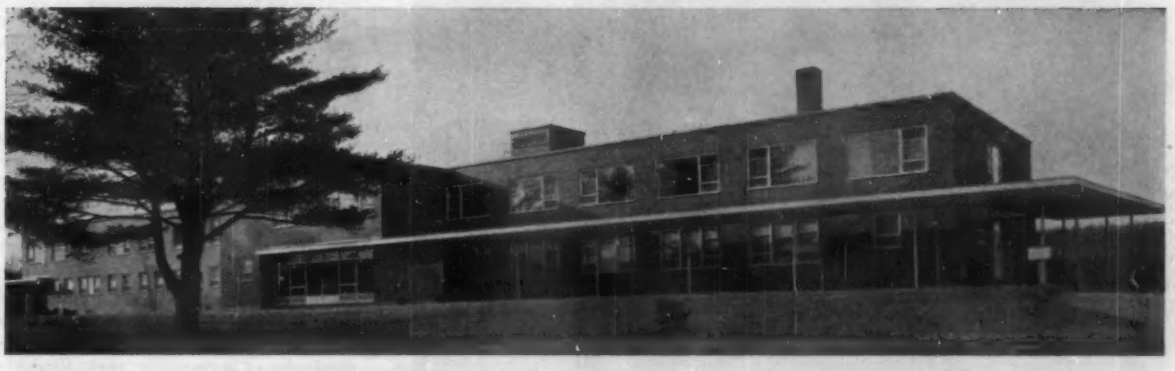


Illustration: Webster (Mass.) District Hospital. Architects: Aisner and Atwood; Capacity: 42 beds; Cost: including site and equipment, $822,693.

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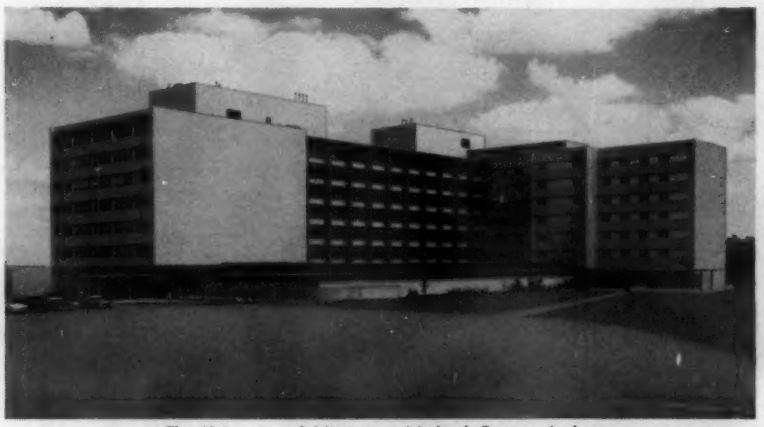
said the product of our schools is a verbalist, delights in structural exhibitionism, lacks taste, can not compose, is cold-blooded, and can not draw.

Equally pessimistic reports came from New York, where Kilham had picked the brains of some of the city's architects. A.I.A. Centennial Medallist Ralph Walker saw little future for architecture and thought architects might as well become engineers, leaving all design to Gordon Bunshaft with interiors by Florence Knoll. "Less is more," quoted Kilham, but added, "Less building for more money." Hugh Ferriss gave up prognosticating after Hiroshima. Bunshaft, himself, was bored, "We've come to an end."

Today's architect seemed subdued, even bewildered. He seemed uncertain where he stood. He was caught in that dilemma America never resolves: whether the architect will be respected as an artist, a professional man, or a businessman.

Letwin charged that architects have done little and can do little to improve the American scene. That deterministic attack was marshalled on four grounds: *America's geographic mobility*, which neutralizes architectural style so that reliable, non-eccentric buildings will be rentable and resaleable; *America's social mobility*, which reduces radical differences so that a relatively high standard of living prevails even without a servant class; *America's liberal democracy*, in which a relatively small portion of income goes for community and public architecture and that, only modestly, because public buildings do not involve great public sentiment, and grandeur smacks of inefficiency and waste; and finally, *America's system of market leadership*, where prestige advertising may demand occasional brave, new buildings, but will generally encourage an architecture of mediocre conformity because of the risks involved in catering to a fickle public swung by advertising.

That incisive, four-laned attack pictured architecture as a helpless victim of society, seldom able to rise above its cultural slough to produce anything of quality.



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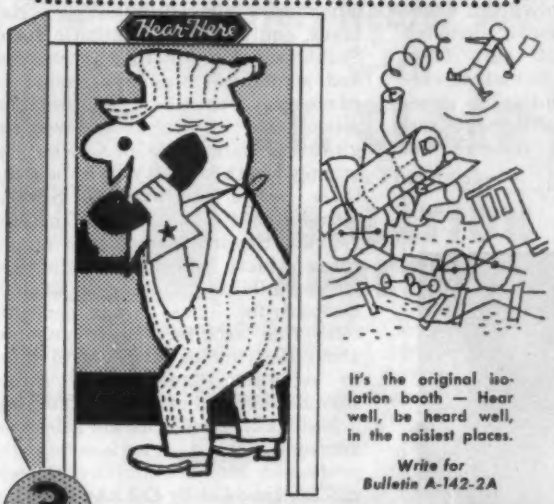
Would Popular Criticism Help?

Letwin's dismal view dampened spirits in tune with Nantucket's cold weather, but it also fired intense interest in improving education, particularly of a popular sort. Stubbins recalled a German waiter in Berlin who closely followed architectural events, even the new Congress Hall, and it seemed to him that America might gain a popular demand for better environment through informed coverage in newspapers and increased art education in schools and universities. Letwin sympathized with the dedicated and noble men who believe in the social and educational responsibilities of the architect, but his sympathy was tempered by a conviction that education is at best a slow and local procedure that cannot guarantee a better taste.

Feeling ran strong against bad architecture, and there was no mooting of the opinion that architects should be made publicly accountable for errors, not only in performance but in esthetics. Lawyers, after all, lose half their cases, and doctors bury their mistakes: why shouldn't architects be allowed to admit theirs with equal candor? Kirwan asked whether criticism might improve architecture, and Rudolph agreed it might, but noted that we have no real critics in this country comparable to those in England. No one stopped to reflect that all the cozy and new brutal words and pictures in the *Architectural Review* have not improved English architecture very much; perhaps the problem of changing taste does not lie there at all.

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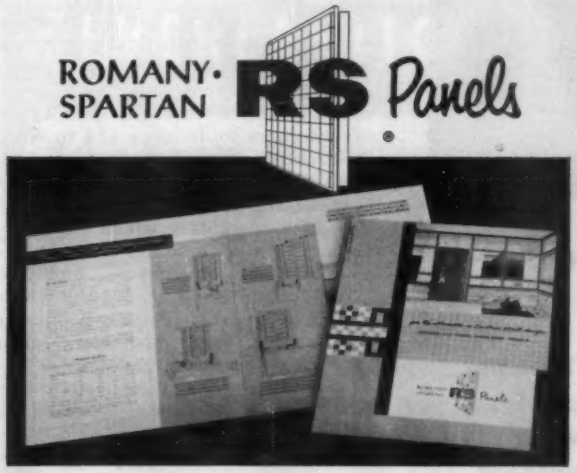


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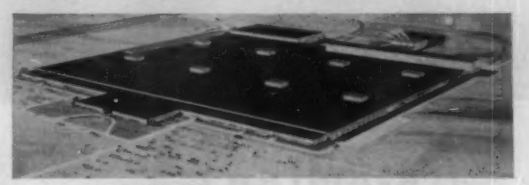


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GLEN RIDDLE 10, PENNSYLVANIA

Grady Clay, crack real estate man for the *Louisville Courier-Journal*, pulls few punches as he walks the tightrope between educational criticism and libelous slander. Architects, he believes, have been far too aloof professionally, and he endorses the whip-flailing techniques of Australia's bright young critic Robin Boyd who has exorcized many an architect. A good many participants readily agreed with Pickens that it is long past time for the A.I.A. to review its rules about criticizing fellow architects.

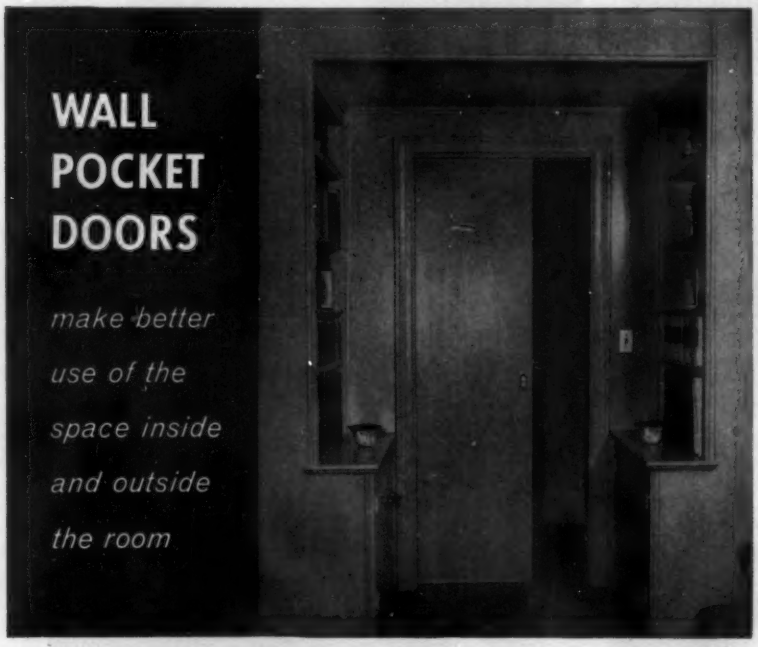
The Architect as Entrepreneur? Even the best criticism might not be enough. Letwin thought it was particularly perverse of the architect to remain on the sidelines complaining; he should enter the entrepreneurial fray, command large investment funds, and build. This raised considerable interest, not only from Stubbins, who had previously extolled Nervi's business, but also from Cochran, who wanted to mature students by requiring on-the-job experience and courses in office organization, law and finance (though one wondered whether this was in character).

One fact was unmistakable: proficiency in design now required integration of many specialists. With "mechanical" figures flying about—sometimes you heard 40, more impressively 60 per cent—there was much alarm about integrating structures, equipment and esthetic form. Stubbins asked whether mechanical and structural engineers should be educated within architectural schools, particularly if the best engineering minds continue to be preoccupied with rocketry. Why *not* call these people "architects"? Similar ideas seemed to be guiding the curriculum Shadbolt was working out for an ideal school embracing the whole building industry, a kind of Boucentrum. Thus it was perfectly clear that architects were unhappy about the current tendency to think in separate compartments rather than of the total concept of building.

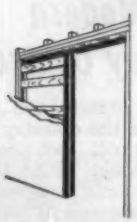
Naturally, the discussion raised demurrers against fractionating the profession into a hierarchy of technicians crowned by the designer, but it also suggested a means for keeping non-designers within the profession. Remarkably there was little antipathy toward the idea of group action. Netsch, understandably, was willing to let time be the judge of whether such offices would produce great architecture, but Yama could be more objective; and he thought we needed both individual and group practice, particularly when a firm like S.O.M. scored one kind of success and thereby enabled other kinds of designers to do more and to do it differently. As might be expected, Stubbins insisted upon leaving decision-making to the artist, not to the vote of a committee which too often comes up with a camel when it attempts to design a horse; and this left Rudolph thinking that the whole notion of a team, so avidly promoted by Gropius, is a misnomer: since only one person ultimately lies behind the decisions of any group. But even Rudolph, in resisting the idea of the coordinator, skirted the fact that integration of performance components may require further exploration of group action.

Worry: Environmental Control Obviously, all designers today are worried about mechanical equipment and structural systems. R.P.I.'s Hauf reminded us that the emphasis on techniques, reflected in the doubling of Sweet's in 15 years, too often leads students to believe that any design can be made to work.

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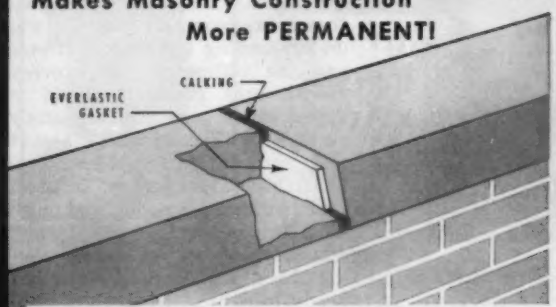
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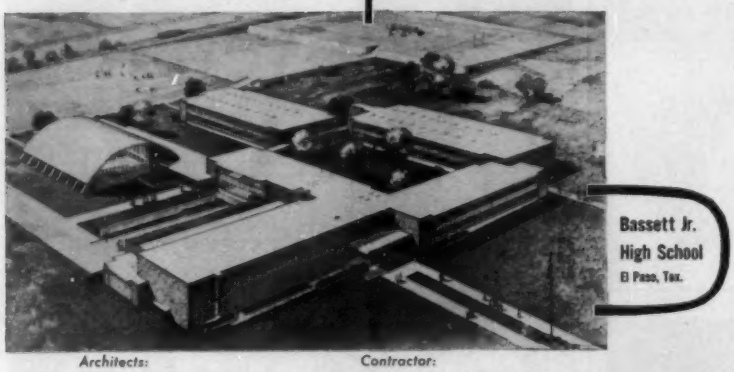
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immorality of architects who ignore the client's stipulated requirements, especially in acoustics, when they don't fit the design fad of the moment or will not look well in Stoller's photographs.

Several men toyed for a while with the idea of a new kind of course embracing environmental control, including all the separate disciplines, to be taken in conjunction with design in the third year and made the basis for one kind of specialization in the upper years. Named "the corridor curriculum" because of its insistence upon a major in design and a side-room specialization, the scheme seemed to have merit for many schools: those where only desultory attention is given to mechanical engineering and also those, paradoxically, where speciality courses have proliferated to the point of being more electives.

Still another advantage might come from this curriculum; the opportunity to specialize in structures in conjunction with architectural design. In this area, Yale's Henry Pfisterer described a series of courses, with mathematics and physics as prerequisites, which begin with practical demonstrations in making rudimentary models with sticks and pins, then move into study of simple members in steel, wood and concrete, a non-analytic survey of materials, methods, and manufacturing processes—all to determine the properties and limits of structures. There were questions of how much simplification was allowable, the use of models and slides as teaching aids, the coordination of courses by giving them in proper sequence so that the student learns to coordinate by himself. What of the economic evaluation of structures? Yes, this must be done. But integration? That belong to the design critics. And this recurrent answer—the crux—unfortunately was not assaulted head-on. Many, like Rudolph, felt a bee in the bonnet, as he put it: Our buildings at large scale resemble Swiss cheese riddled with mechanical equipment. Integration of this with structure, to achieve a unified and plastic result, remains the toughest problem facing the designer today.

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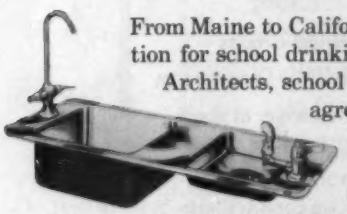
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Are We Doing Better in Design?

Having performed the valuable task of defining the mechanical-structure-design problem, if not of suggesting solutions, the conference looked at Architectural Design.

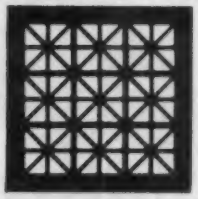
Over and over again, we heard that Design is begun too early. Stubbins would like to see it come only after students have received a liberal education; Netsch also would introduce it late, after students have acquired what he called a "language," that is, as near as I got it, a way of understanding physical environment and the calligraphy of expression. He thought students should work from firm, methodical analysis, starting with mechanical, acoustical and structural requirements, emphasizing large spaces, buttressing them with smaller ones, and only afterward considering the form and character of the enclosure.

Others, I gathered, would be less ready to subject themselves or their students to that programmatic approach of the thirties, and some even questioned whether the Air Force Academy Chapel reflected that analysis.

One positive suggestion from Netsch had interesting implications. In connection with his work for the Board of Architectural Registration in Illinois, Netsch has been trying to develop design problems that will require several alternative solutions. Given a simple program requiring two spaces, a candidate might be asked to form spaces enclosed by

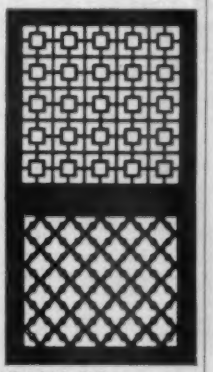
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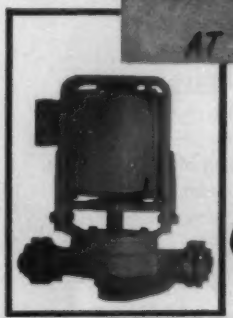
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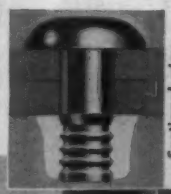


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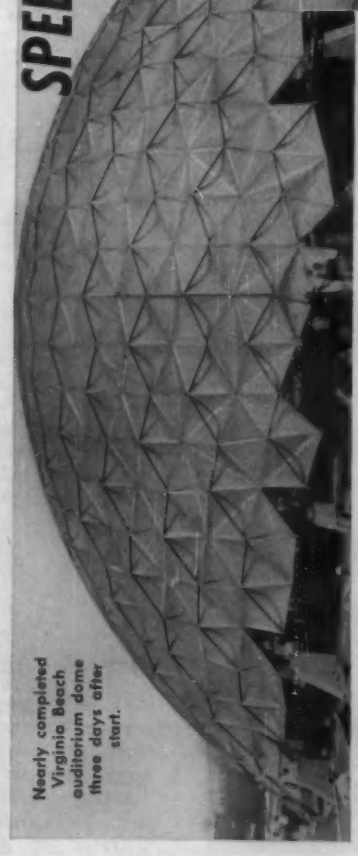
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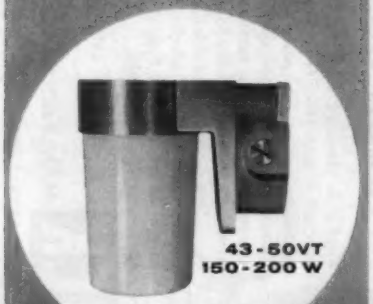


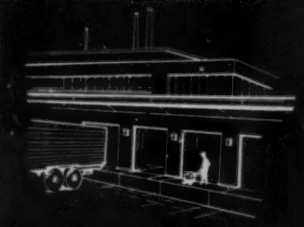
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both a traditional and a new structural system. Such a project, it was thought, would force students to concentrate on the manipulation of space, coming up with several solutions to the same problem in an effort to realize the implications and limitations of space, structure and materials without freezing immediately upon a fixed design.

Failure in Town Planning

That discussion of campus design readily occasioned a review of our progress in Town Planning. Here the watchword was REALISM. Stubbins announced the need to get humanity into our cities, and he agreed with the general opinion that Le Corbusier's big blocks and open spaces were not realistic in terms of America's social fabric.

Three approaches were discussed. First, there was the approach of the urban designer, who was concerned about the century-old loss of hierarchy among building types, a loss that has brought us to the perilous condition of aggrandizing buildings that are private rather than public, commercial rather than spiritual. Unfortunately, Yama said, society no longer requires our public buildings to be the big ones, and Letwin had already mentioned that today architecture's best efforts are called forth by progressive businesses, not the centers of government, education and religion. Furthermore, there was concern about the tendency to compartmentalize by segregating functions into deserts of cultural centers, activity-filled shopping centers, and distant residential cores. Netsch worried about the problems of adding new buildings in old contexts, and all were concerned about the new Park Avenue, which seemed to Yama to be an endless, indefinite wall; and he was afraid of having one firm, one person or one idea control a whole area. De Mars had raised the question of time as a continuum earlier, and he wondered whether we might define the scale at which a project can no longer be the work of a single individual. The A.I.A.'s Walter Taylor here suggested that there are various time scales to be considered, whether we refer to the structural life of a building, perhaps a hundred years, its financial life, perhaps 20 years, or its social life, perhaps 40 years; and suggested that we consider the time-scale needed for each design.

But architects are seldom persuaded to build for expendability, even a Wurster or a Gropius who once

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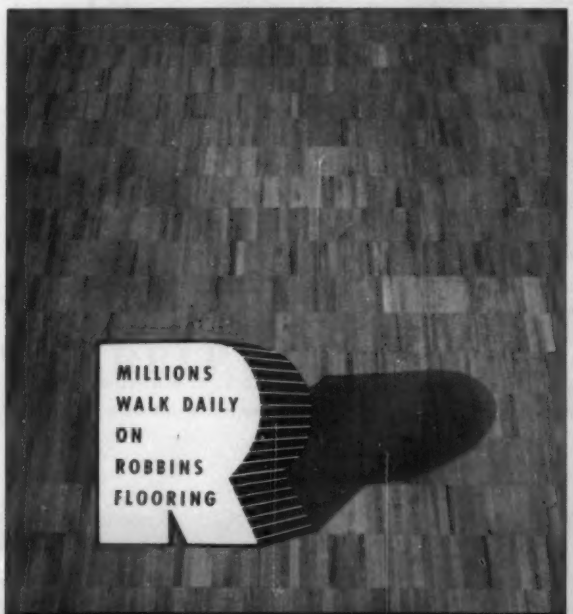
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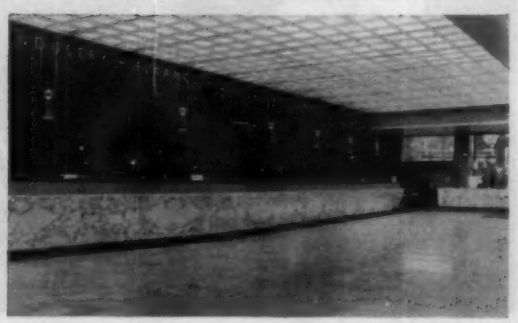
MARBLE
a vital need in contemporary design

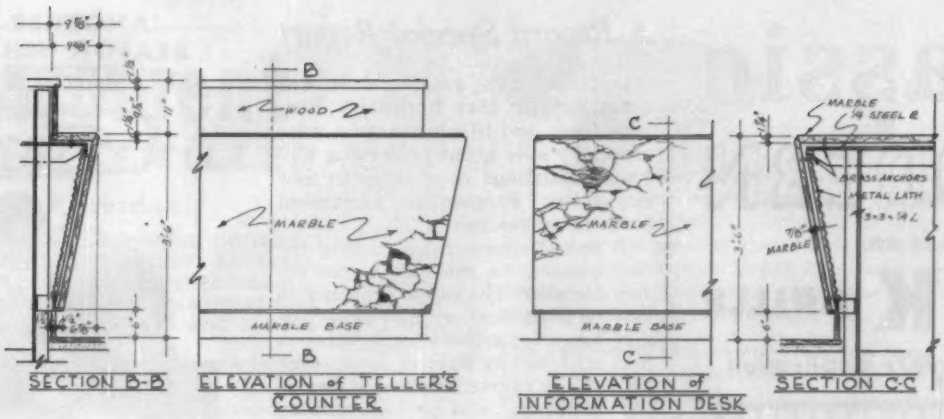
The significance of contemporary design lies in its simplicity, directness and exploitation of essentially beautiful materials. Modern architects have learned to express order and function in the plan and attain occasional moments of magnificence without depending upon extraneous elements.

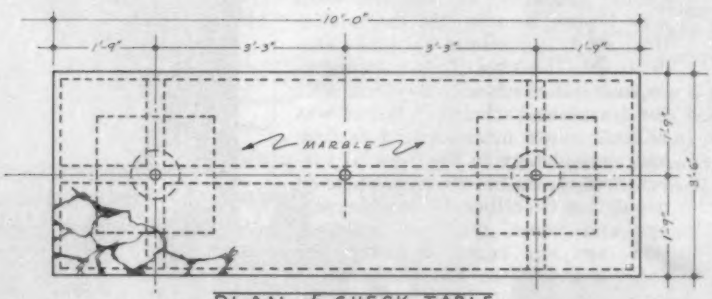
In this beautiful bank interior, marble lends a note of freshness and clarity which no other material would have provided so admirably. The detailing is simple and delicate; and the juxtaposition of textures and patterns provides the necessary decoration. The total effect is extremely clear and denotes efficiency without detracting from the element of refinement so necessary in a bank. Marble, traditional in bank interiors, enhances a new mode of expression completely adaptable to contemporary needs.

There is a beautiful brochure "Marble for the Modern Bank," describing and illustrating further uses of marble in bank design, available free by writing the Marble Institute of America.

HARVARD TRUST COMPANY, CAMBRIDGE, MASS.
Architects: Perry, Shaw, Hepburn & Dean





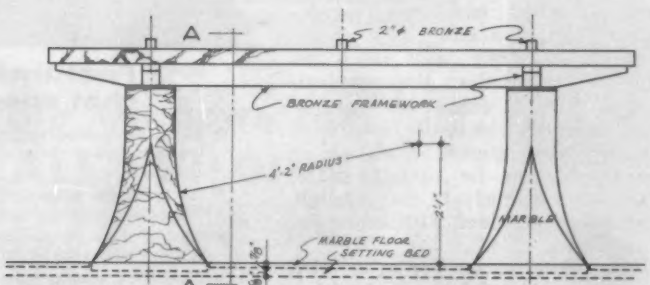


PLAN of CHECK TABLE

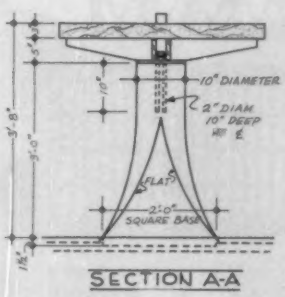
SCHEDULE of MATERIALS

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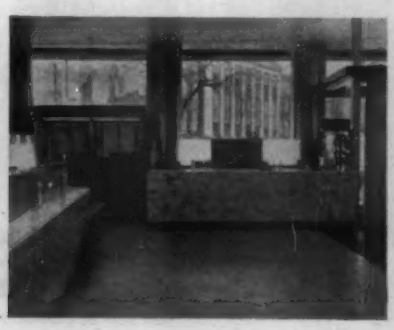
ELEVATION of CHECK TABLE



SECTION A-A

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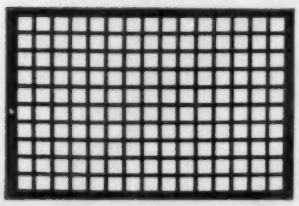



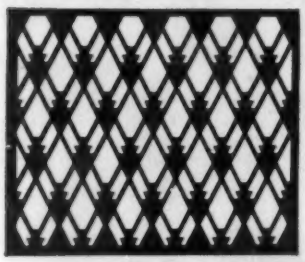

Classic or MODERN

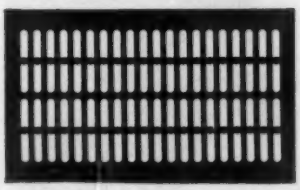
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A Record Special Report

championed this goal; and it was characteristic that Berkeley's Barclay Jones and Stephen Jacobs were especially avid about preserving historical buildings as anchors in new city plans. Utopianism succumbed to the new realism.

A second approach was that of the city planner, in contrast to the urban designer. The recent tendency to rely on statistical, even pseudoscientific bases for architectural decisions was criticized by Barclay Jones, even though the course he gives at Berkeley seems to aim at determining physical planning on the basis of similar appraisals of land use. With good humor, he admitted that statistical study sometimes misleads students into thinking of a dormitory as "a multiple nonfamily dwelling unit for transient bachelors," but it was difficult to see much beyond realism and methodology in the colorful surveys and charts his students made on population described by income, sex, age and crime, types of building, their age and rents; however, one chart showing the Balkanization of local government into overlapping, subdivided jurisdictions over water, sewers, smog, mosquitos, assessments, highways and public transportation certainly must teach the architectural student the complexities of liberal democratic government and alert him to the realities of any land use patterns, legislation, or visual solution he proposes. The question remained: Is this enough, even when combined with urban design?

"No" was the answer of a third group, who wanted the variety implicit in "planned chaos," mixed activities without a single dominant image, without Utopianism. This was what de Mars wanted in mixing dwelling types and leaving the cliffs rustic at Easter Hills—that celebrated "Radburn on the Rocks." It was what Grady Clay meant by journalizing Charlie Thompson, the pitchman who sets up a Victorian sofa and a 50-gal oil drum of burning charcoal to sell Christmas trees in Haymarket Square; wasn't Charlie written out of specifications by the architects of redevelopment? Clay walked miles in 12 American downtowns to find out. Most of what he saw seemed to bear the marks of a giant corporation intent on uglification at a colossal scale. But he also found in Savannah, in Cincinnati and other towns much that he admired: open spaces, fountains, the mixing of business, recreation, government, and culture, where one

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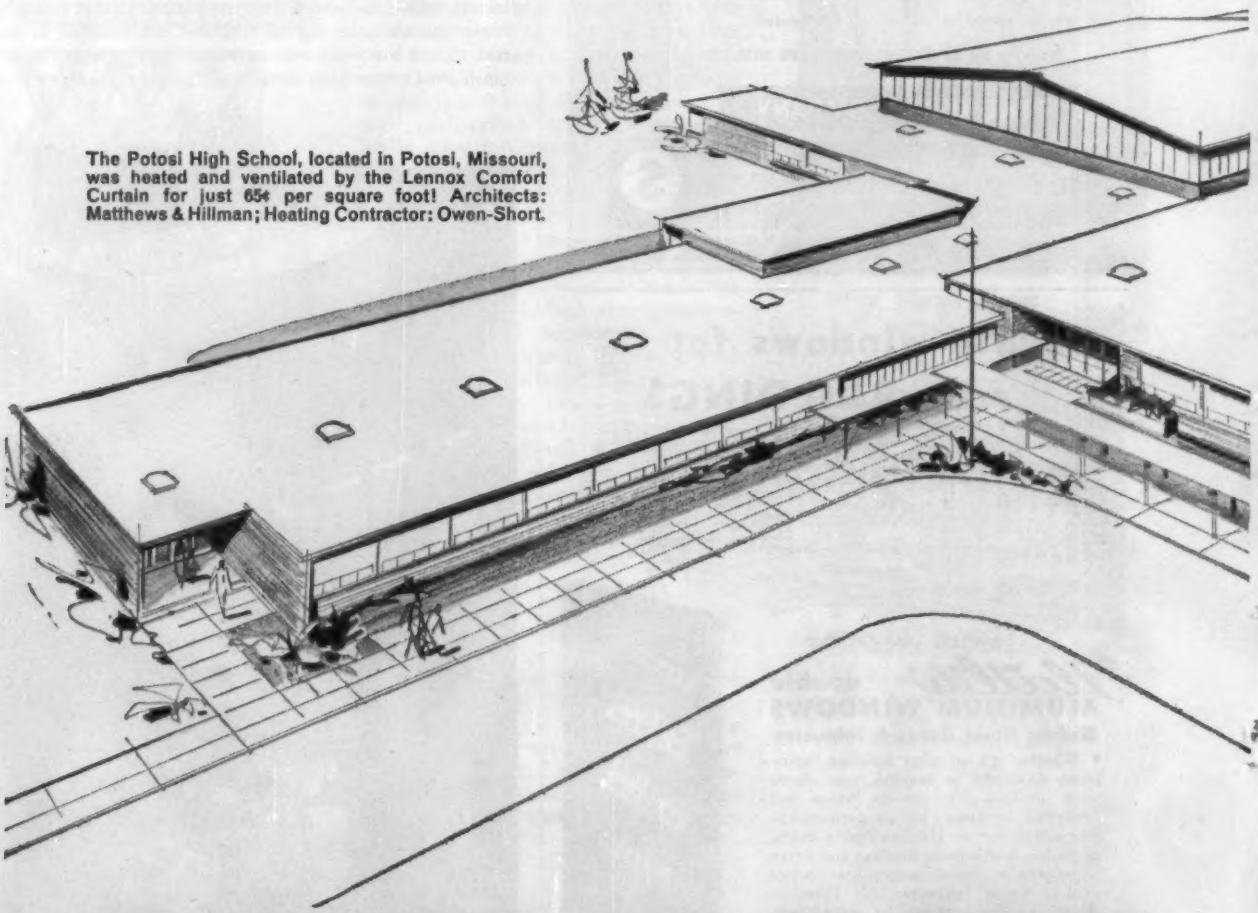
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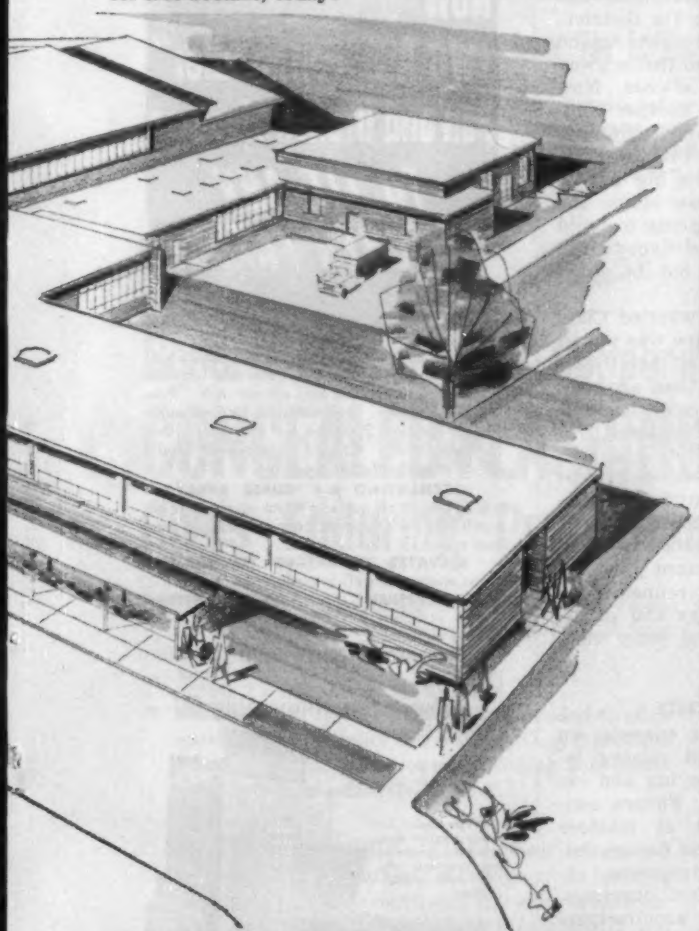
LENNOX COM

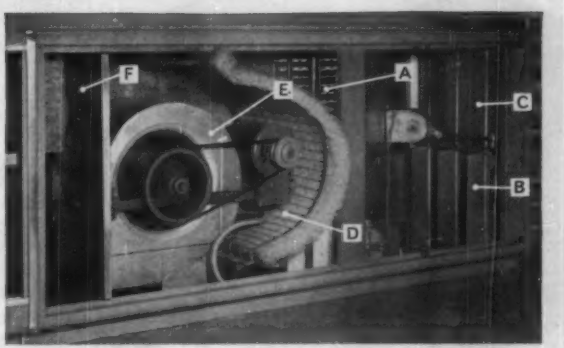
air heating and ventilating — controls — for just 65¢ per square foot!

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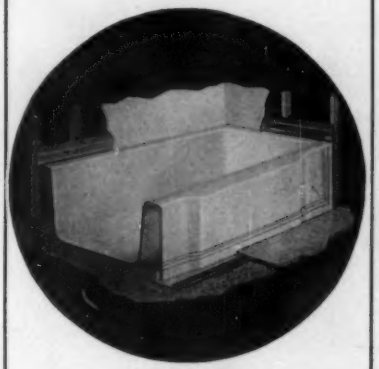
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A Record Special Report

might stand and feel the life of a city; panhandlers here seemed to be the most sensitive indices to the paths and centers of power. Clay and others delighted in New Orleans' aspect of carnival, with its tourist baits, and New York's capacity to provide anything you might want at any hour day or night. There was a lot here that is not commonly thought of as part of a visual design. De Mars' slides recalled the Scandinavian street furniture and signs, advertising posts, flower pots and telephone booths. It was obvious that these critics wanted beauty and humanity; they were sentimental about cities, and to make their point they dwelt upon "cozy" features, the cobblestones and play sculpture, the peeling paint, and the sin district; there was life there all right. Acland raged: "It took years to throw away those other imported clichés. Now you want to dally with another English lot of cozy, itzy-bitsy, empirical fiddly-diddling. I saw this in England. Give me back the big gorilla who sweeps a grimy paw across the horizon and says he's going to build the biggest god-damned dam in the world. He was tough, but he stood for something real!"

Exactly that gorilla worried Clay, particularly when the ape was put in charge of 41,000 miles of new highway with more power than anybody outside atomic energy, with no limitations subject to enlightened review. No one else liked that gorilla either, but neither were many entirely pleased either with coziness, which St. Peter's certainly doesn't have, nor do London clubs, nor fine libraries, nor sophisticated gardens. Aren't cities places of refinement—not just big white ways and carnivals with hucksters and jazzy merchandise?

The Educational Results

We certainly spent our energies on defining objectives and raising issues, rather than conveying and exchanging information. Future conferences should point at matters such as scale, landscape design, environmental control, structures, expansion of architectural curricula, principles of design, architectural journalism, and architectural history. As a profession, we should know who we are by this time; we should know also what our work is, and where we are going. One mark was clear: the profession needs to review its responsibilities for training clients and professionals.

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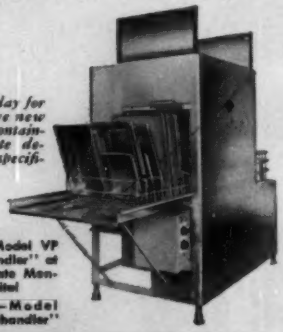
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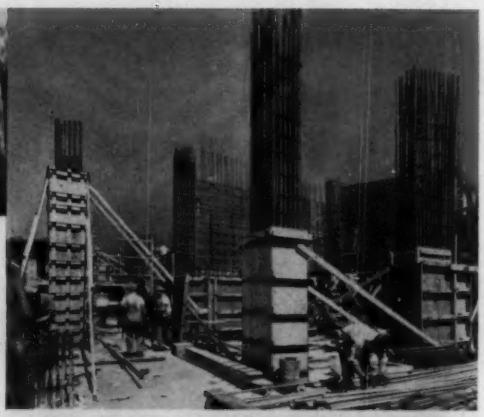


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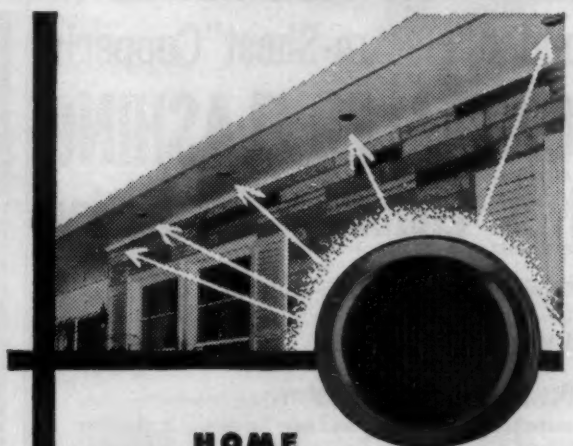
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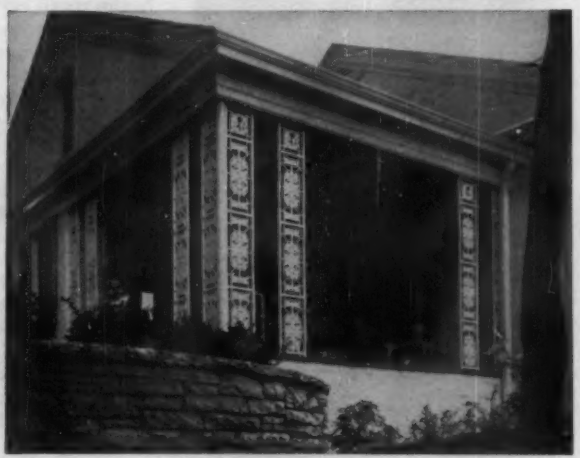




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Required Reading

continued from page 64

Recreation . . .

tical" and is aimed at specific requirements for various games and sports facilities: playgrounds, stadiums, swimming pools, areas for organized group sports and for winter sports. There are numerous plans, diagrams and, when necessary, construction details.

Thermal Comfort Surveyed

The Weather Conditioned House. *By Groff Conklin. Reinhold Publishing Corp. (New York), 1958. 238 pp., illus. $14.75.*

The author has made a considerable effort to assemble technical data and information pertinent to the design of houses for thermal comfort. He has searched all the classic literature sources (*ASHAE Guide*, government publications, technical conferences, etc.)—a goodly number of which the average house designer could hardly be aware of—and then selected and digested the useful parts.

It is hardly a design handbook. In his preface the author says, "I have made an effort to present the material in an informal and readable manner." While this objective may help the more lay reader, and perhaps in this way encourage greater respect for the vagaries of climate, it detracts from the book's usefulness to the designer who is more accustomed to looking for step-by-step procedure.

The book is developed in quite logical fashion and includes these main topics: elements of environmental control for houses; orientation and climate; principles of thermal control; principles of moisture control: winter; principles of thermal control: summer; special problems of hot climates; heating and cooling systems; principles of sound control (the author deals mainly with overall sound problems within a house rather than specifically those of comfort-conditioning systems); principles of deterioration control.

Groff Conklin's view of the topic is more that of a researcher into the literature than a house designer or design engineer. This approach has, it would appear, led him to prepare a book of current data and techniques. It would have been helpful if he had related these to an overall design procedure, or at least demonstrated the manifestations in house design of current technical knowledge. Perhaps for this reason also, the illustrations seem rather conglomerate.

—Robert E. Fischer

more books on page 390

THE DIRECTLY PRACTICAL HANDBOOK OF STRUCTURAL ENGINEERING



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by Thomas H. McKaig, B.Arch., C.E.

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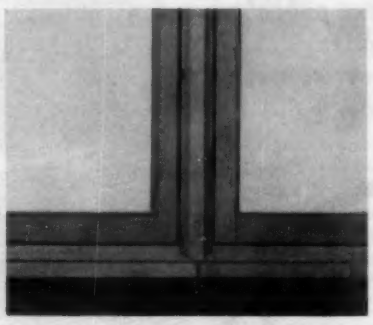
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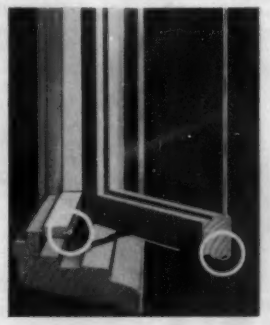
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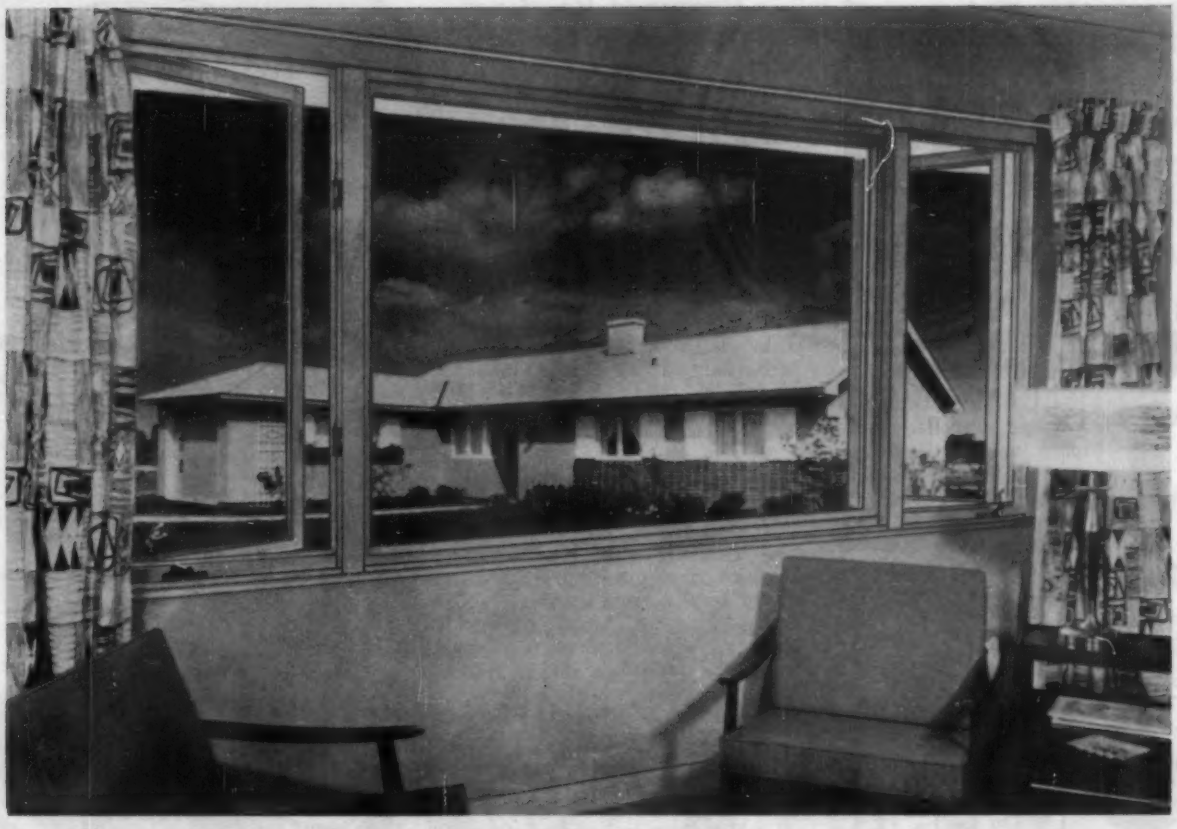
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8"	280	278	176	128
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Required Reading

continued on page 386

Planning From Several Angles

Planning has been thought necessary in this country ever since the Virginia legislature in 1662 limited the number of houses in James City to 32. But in recent years as it has become painfully obvious that more and more people are trying to crowd onto certain portions of the globe, the emphasis has shifted from piecemeal restrictions to large-scale remedial renewal and master plans that will, hopefully, keep urban and suburban areas perpetually renewed.

In this democracy, everything starts with a law; **Planning Laws** (Supt. of Documents, U. S. Govt. Printing Office, Washington 25, D. C.; 77 pp.; 70 cents), compiled by the Office of General Counsel of the Housing and Home Finance Agency, presents in chart and summary form a comparative digest of state statutes for community, county, region, and state planning through December, 1957. Another basic reference source is the **Housing and Urban Renewal Directory: 1958-59** (National Assn. of Housing and Redevelopment Officials, 1313 E. 60th St., Chicago 37, Ill.; 239 pp.; $30—less to civic groups and N.A.H.R.O. members), listing official and unofficial federal, state, and local agencies, with personnel, brief descriptions of the functions of each, etc.

An interesting collection of statistics and opinions about many aspects of housing and planning is **The Housing Yearbook: 1958** (National Housing Conference, 1025 Conn. Ave., N. W., Washington 6, D. C.; 72 pp., illus.; $3). One article presents figures leading to the conclusion that 71.5 per cent of the nation's families cannot afford the lowest priced private houses being built now. **Retail Trade** (Dept. of Planning, 400 Municipal Bldg., Baltimore 2, Md.; 95 pp., illus.) is a handsome study of shopping trends in the Baltimore area and their probable long-term results.

Britain and Israel have produced two stimulating new books. A. W. Cleve Barr, formerly assistant housing architect of the London County Council, surveys **Public Authority Housing** (B. T. Batsford, Ltd., London; 287 pp., illus.; 5-5s.) since the war in profusely illustrated detail. **Zevulun New Town: Haifa Bay Area** (Israel Business Books, Haifa; 82 pp., illus.; $2.75) is an interesting example of a detailed master plan by Karl H. Baruth, an experienced planning consultant.

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MEMO TO MEN
ON THE WAY UP



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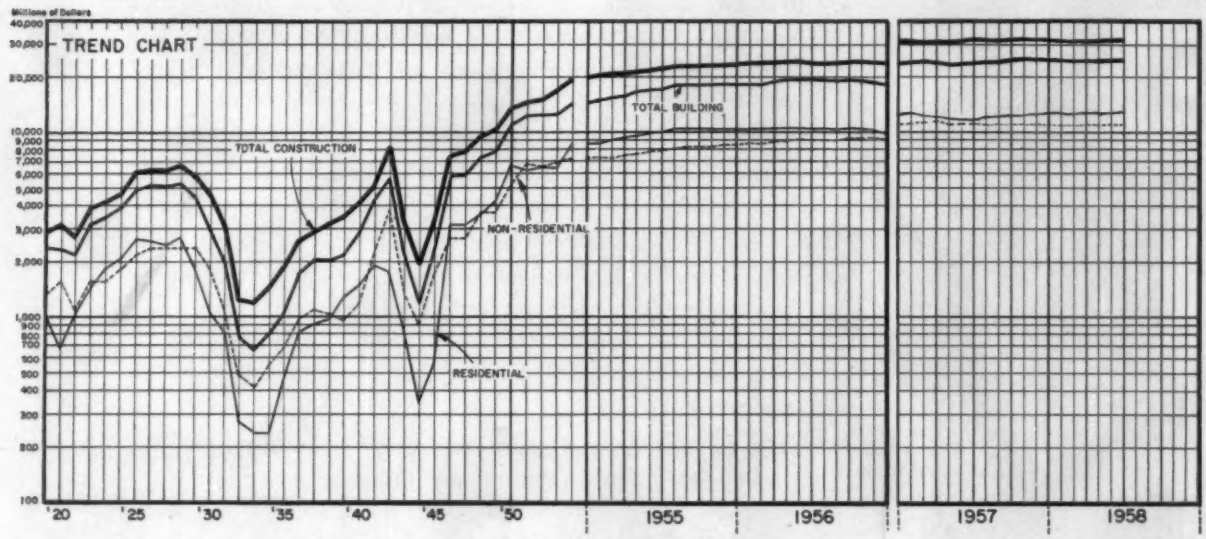
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Hiroshima, Japan; Architect: Kenzo Tange
First presented to architects and engineers in Architectural Record.

Current Trends in Construction

As Reflected in Contracts for Future Construction in the U.S. Reported and Tabulated by F. W. Dodge Corporation



SEVEN MONTHS OF 1958 TOP 1957 PERIOD

It's a better year than last. A whopping 24 per cent increase over the 1957 month in the July totals of construction contracts in the U.S. reported by F. W. Dodge Corporation brought the cumulative total for the first seven months of 1958 to $20,369,554,000, three per cent above the comparative 1957 total. In releasing the latest figures, Dodge noted that the last three months have produced the highest monthly construction contract totals in history—with June first, July second and May third.

Several significant features of the July figures were noted by Dr. George Cline Smith, F. W. Dodge vice president and economist.

"For the first time this year," he said, "all three of the major branches of construction gained over the corresponding month of last year, and all the gains were substantial. The tremendous July total also helped overcome the weakness which was apparent at the beginning of the year, so that for the first time in July, the year-to-year figure is ahead of the same period of 1957 by three per cent.

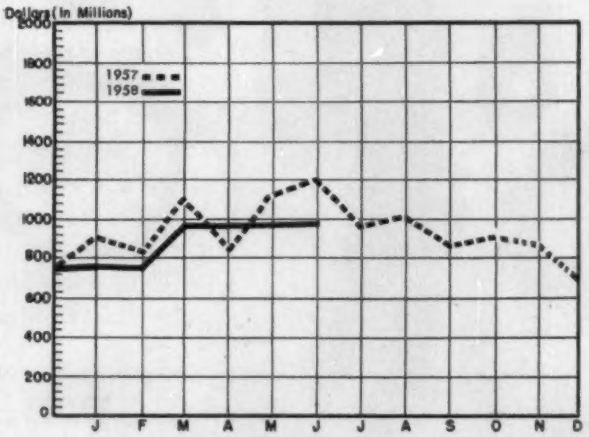
"Despite the recession earlier in the year, contracts now seem to be well on their way toward a new record in 1958. The recovery continues to have a very broad base, with virtually everything except business spending for commercial and factory buildings going upward.

"Among the most buoyant forces in July contracts were schools, up 20 per cent above July 1957; streets and highways, up 67 per cent; residential buildings, up 21 per cent; public utilities, up 35 per cent; public buildings, up 48 per cent; social and recreational buildings, up 34 per cent; religious buildings, up 22 per cent; and hospitals, up eight per cent.

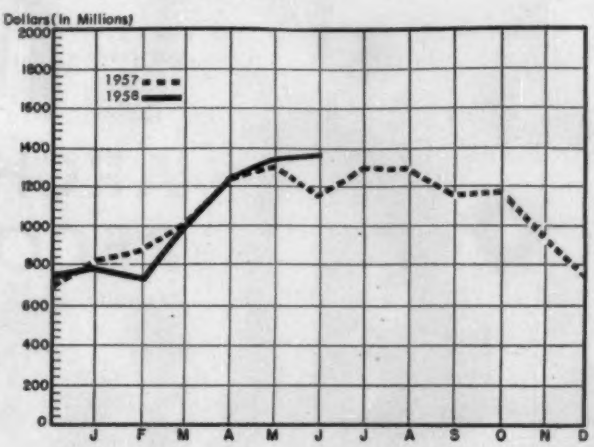
"Increases in apartment building contracts, up 44 per cent, continue to lead the residential upturn; but contracts for one- and two-family houses also rose in July by a substantial 18 per cent. The July contracts covered 121,023 dwelling units, a gain of 26 per cent over July 1957, bringing the seven-month total to 635,798, or seven per cent ahead of the same period last year."

Total construction contracts for July amounted to $3,607,056,000.

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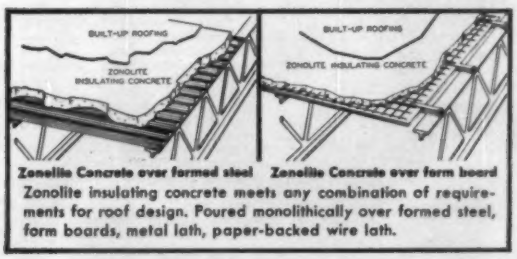


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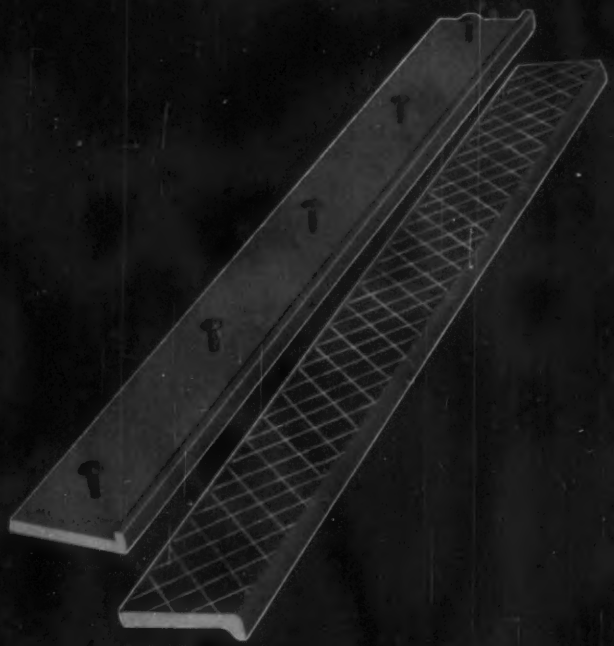
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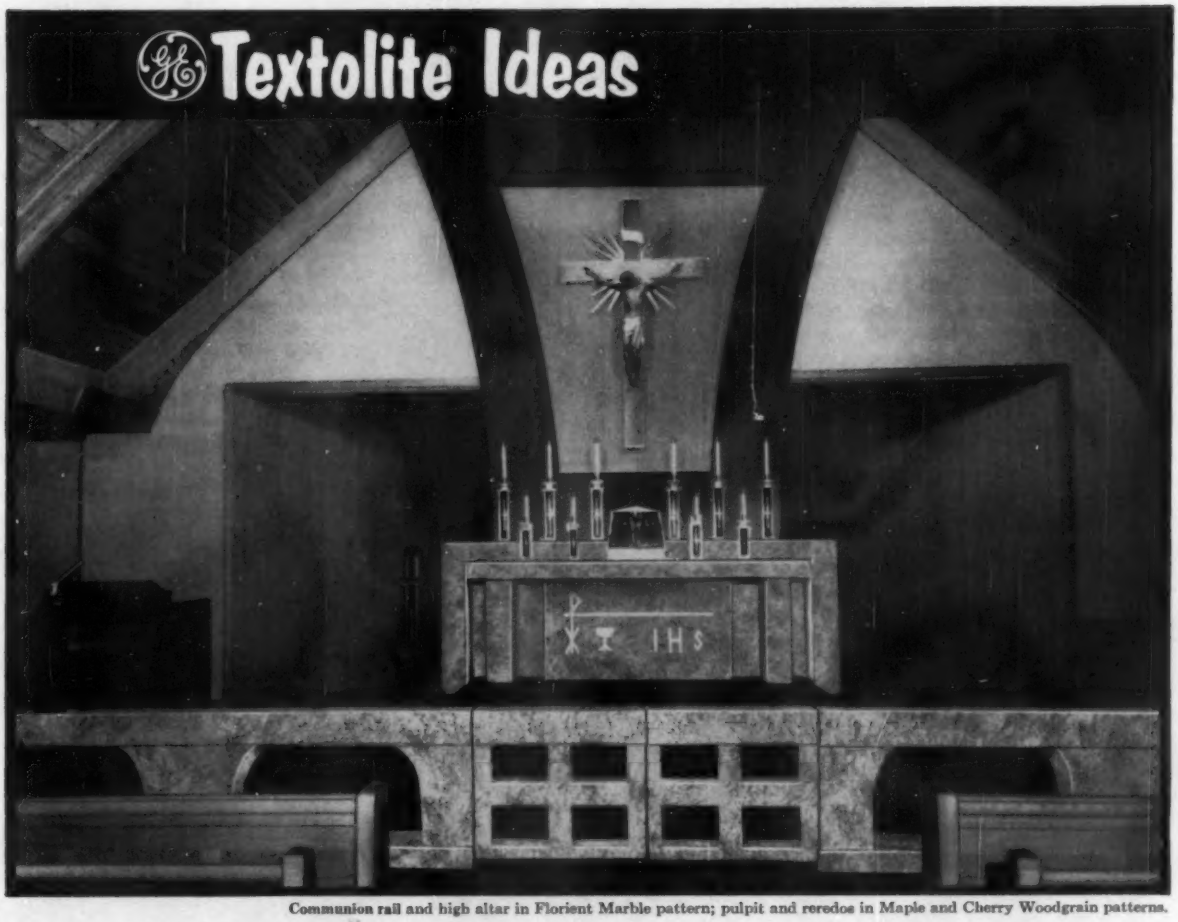
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